

SERVICE MANUAL 2235

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model 2235

Stereophonic Receiver

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INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 2235 Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instruction should be read carefully. No attempt should be made to proceed without a good understanding of the operation in the receiver.

The parts list furnishes information by which replacement part may be ordered from the Marantz Company. A simple description is included for parts which can be usually be obtained through local suppliers.

1. P.W. BOARD

As can be seen from the circuit diagram, the chassis of Model 2235 consists of following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

- | | | |
|---|-------|-----------------------------|
| 1. FM Front End | ..... | mounted on P.W. Board, P100 |
| 2. AM Tuner | ..... | mounted on P.W. Board, P150 |
| 3. FM IF Amplifier | ..... | mounted on P.W. Board, P200 |
| 4. MPX Stereo Decorder | ..... | mounted on P.W. Board, P300 |
| 5. Dolby Level | ..... | mounted on P.W. Board, PC01 |
| 6. Antenna Muting | ..... | mounted on P.W. Board, PU01 |
| 7. Function Lamp | ..... | mounted on P.W. Board, PY01 |
| 8. Dial Lamp | ..... | mounted on P.W. Board, PZ01 |
| 9. Dolby FM, Monitor, Mono and Hi Filter Switch | ..... | mounted on P.W. Board PH01 |
| 10. Loudness, FM Muting, Main and Remote Speaker Switch | ..... | mounted on P.W. Board, PT01 |
| 11. Phono Amplifier | ..... | mounted on P.W. Board, P400 |
| 12. Pre and Tone Amplifier | ..... | mounted on P.W. Board, PE01 |
| 13. Main Amplifier | ..... | mounted on P.W. Board, P700 |
| 14. Power Supply | ..... | mounted on P.W. Board, P800 |

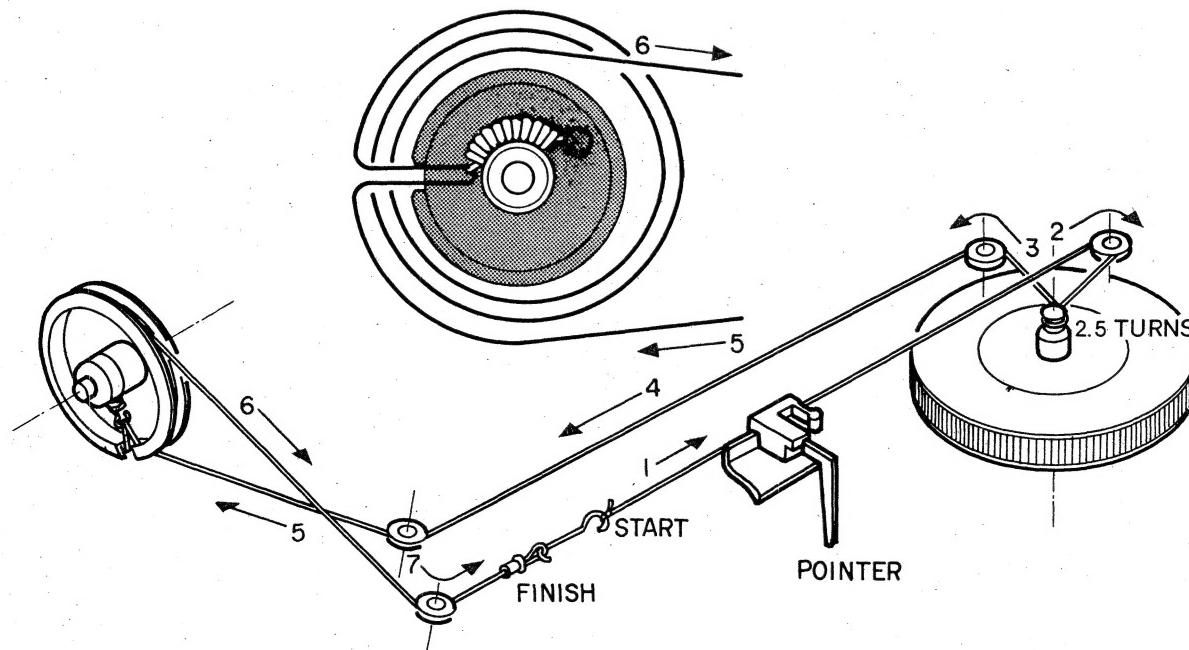


Figure 1. Dial Stringing

2. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 2235 Receiver.

Table 1. Test Equipment Required for Servicing

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment.
Test Loop		Used with AM Signal generator.
FM Signal Generator	Less than 0.3% distortion	Signal source for FM alignment.
Stereo Modulator	Less than 0.3% distortion	Stereo separation alignment and trouble shooting.
Frequency Counter		MPX Oscillator adjustment (VCO).
Audio Oscillator	Weston Model CVO-100P, less than 0.02% residual distortion is required.	Sinewave and squarewave signal source.
Oscilloscope	High sensitivity with DC horizontal and vertical amplifiers.	Waveform analysis and trouble shooting and ASO alignment.
VTVM	With AC, DC, RF range	Voltage measurements.
Circuit Tester		Trouble shooting.
AC Wattmeter	Simpson, Model 380	Monitors primary power to Amplifier.
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition.
Line Voltmeter	Commercial Grade (0-150V AC)	Monitors voltage of primary power to amplifier.
Variable Autotransformer (0-140V AC, 10 amps)	Powerstat, Model 116B	Adjusts level of primary power to amplifier.
Shorting Plug	Use phono plug with 600 ohm across center pin and shell.	Shorts amplifier input to eliminate noise pickup.
Output Load (8 ohms, $\pm 1\%$ 100W)	Commercial Grade	Provides 8-ohm load for amplifier output termination.
Output Load (4 ohms, $\pm 1\%$ 100W)	Commercial Grade	Provides 4-ohm load for amplifier output termination.

3. AM ALIGNMENT PROCEDURES

3.1 AM IF Alignment

1. Connect a sweep generator to the J153 and an alignment scope to the test point R167 (outside).
2. Rotate each core of IF transformer L153 for maximum height and flat top symmetrical response.

3.2 AM Frequency Range and Tracking Alignment

1. Set AM signal generator to 515kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L152 for maximum audio output.
2. Set the signal generator to 1650kHz. Place the tuning pointer in the high frequency end and adjust the oscillator trimmer on the oscillator tuning capacitor for maximum audio output.

3. Repeat the steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 600kHz and tune the receiver to the same frequency and adjust a slug core of AM ferrite rod antenna and RF coil L151 for maximum output.
5. Set the generator to 1400kHz and tune the receiver to the same frequency and adjust both trimming capacitors of antenna and RF tuned circuit for maximum output.
6. Repeat the steps 4 and 5 until no further adjustment is necessary.

Note: During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

3.3 AM Signal Strength Meter Adjustment

Set the AM Signal generator to 1000kHz with 5K μ V, and adjust R178 so that the signal strength meter may read 80% of the full scale.

4. FM ALIGNMENT PROCEDURES

1. Connect an FM signal generator to the FM ANTENNA terminals and an oscilloscope and an audio distortion analyzer to the TAPE 1 MONITOR OUT jacks on the rear panel.
2. Set the FM SG to 87MHz and provide about 3 to 5 μ V. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the core of oscillator coil L104 to obtain maximum audio output.
3. Set the FM SG to 109MHz and provide about 3 to 5 μ V output. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C106 for maximum output.
4. Repeat the steps 2 and 3 until no further adjustment is necessary.
5. Set the FM SG to 90MHz and tune the receiver to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the antenna coil L101, RF coils L102 and L103 and IF transformer L106 for minimum audio distortion.
6. Set the FM SG to 106 MHz and tune the receiver to the same frequency. Adjust the trimming capacitor C102, C104 and C105 for minimum distortion.
7. Repeat the steps 5 and 6 until no further adjustment is necessary.
8. Adjust the secondary core (upper) of discriminator transformer L201 so that the center tuning meter pointer indicates its center at no signal applied. Set the FM SG to 98MHz and increase its output level to 1K μ V and tune the receiver to the same frequency so that the center tuning meter pointer indicates its center. Adjust the primary core (lower) of L201 for minimum distortion.
9. Set the FM SG to 98MHz with 100K μ V, and adjust R374 so that signal strength meter may read 90% of the full scale.

5. STEREO SEPARATION ALIGNMENT PROCEDURES

1. Set the FM SG to provide 1K μ V at 98MHz. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
2. Turn the FM SG modulation off (with the pilot signal turned off), connect a frequency counter to the test point J310, and adjust R311 so that the frequency counter may precisely read 19kHz.
3. Modulate the FM SG with stereo composite signal consisting of only subchannel signal (of course a pilot signal must be included).
4. Adjust the trimming resistor R301 for maximum and same separation in both channels.

6. MUTING CIRCUIT ALIGNMENT PROCEDURES

1. Connect a VTVM to across the resistor R363 and adjust the resistor R363 until the meter reads 0.75V DC at no signal.

2. Set the FM SG to provide $1K\mu V$ at 98MHz and tune the receiver to the same frequency correctly.
3. Turn on MUTING pushswitch. Shift the FM signal generator frequency to plus and minus and note both plus and minus shifted frequencies at which undesirable audio side responses are muted out. Adjust the R363 so that the same shifted frequencies mute the undesirable side response.
4. Adjust R362 for proper frequency shift at which the muting circuit operates.

7. DOLBY FM TAPE OUTPUT SETTING

1. Set the modulation of FM SG to 400Hz, 50% ($\pm 37.5\text{kHz}$ Dev.).
2. Set the FM SG to provide $1 K\mu V$ at 98MHz. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
3. Turn on DOLBY FM pushswitch. Set the semifixed resistors RC01 and RC02 so that each output of the TAPE OUT jacks R and L become 580mV at VTVM.

8. AUDIO ADJUSTMENT

8.1 Main Amplifier DC Offset Alignment

Connect a DC voltmeter with 0.5 or 1V range between the SPEAKER terminals and adjust the trimming resistor R713 for "zero" DC output on the meter.

Repeat the same procedure for the other channel.

Note: During this alignment no load should be connected to the SPEAKER terminals.

8.2 Idle-Current Adjustment

Connect a VTVM between pins J713 and J717. Next, adjust the trimming resistor R766 for the VTVM reads 8mV DC.

Repeat the same procedure for the other channel.

Note: During this alignment no load should be connected to the speaker terminals.

8.3 Main Amplifier DC Offset Re-Alignment

Check the DC offset voltage aligned in the section 8.2 and if any DC output is observed on the DC voltmeter, adjust R713 again for "zero" output.

9. AUTOMATIC VOLTAGE REGULATOR ADJUSTMENT

Connect a VTVM to J804 (+) and J805 (-) and adjust R806 until the VTVM reads 35V under no signal condition.

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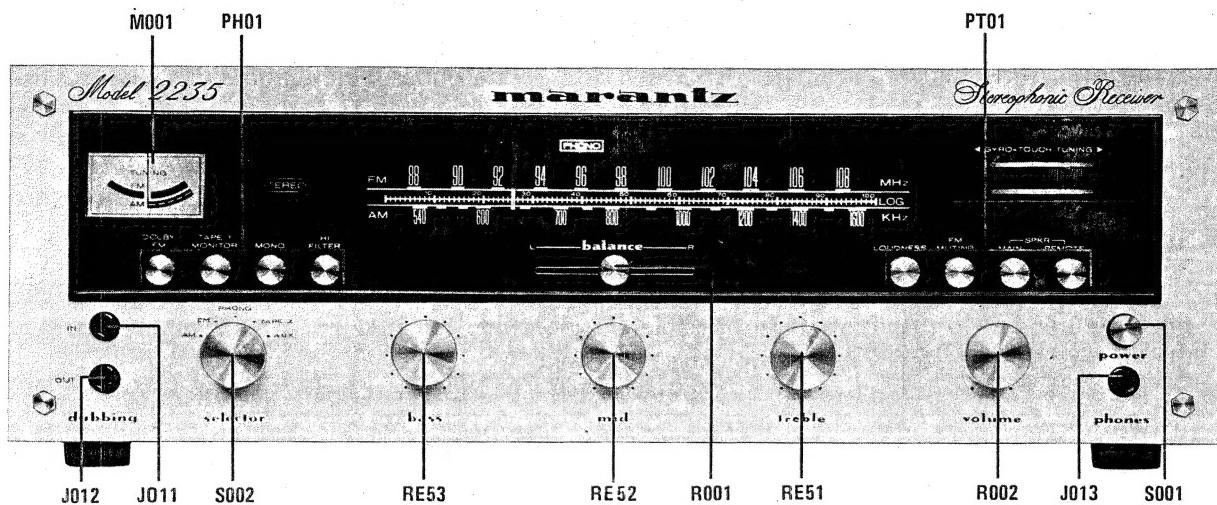


Figure 2. Front Panel Adjustment and Component Locations

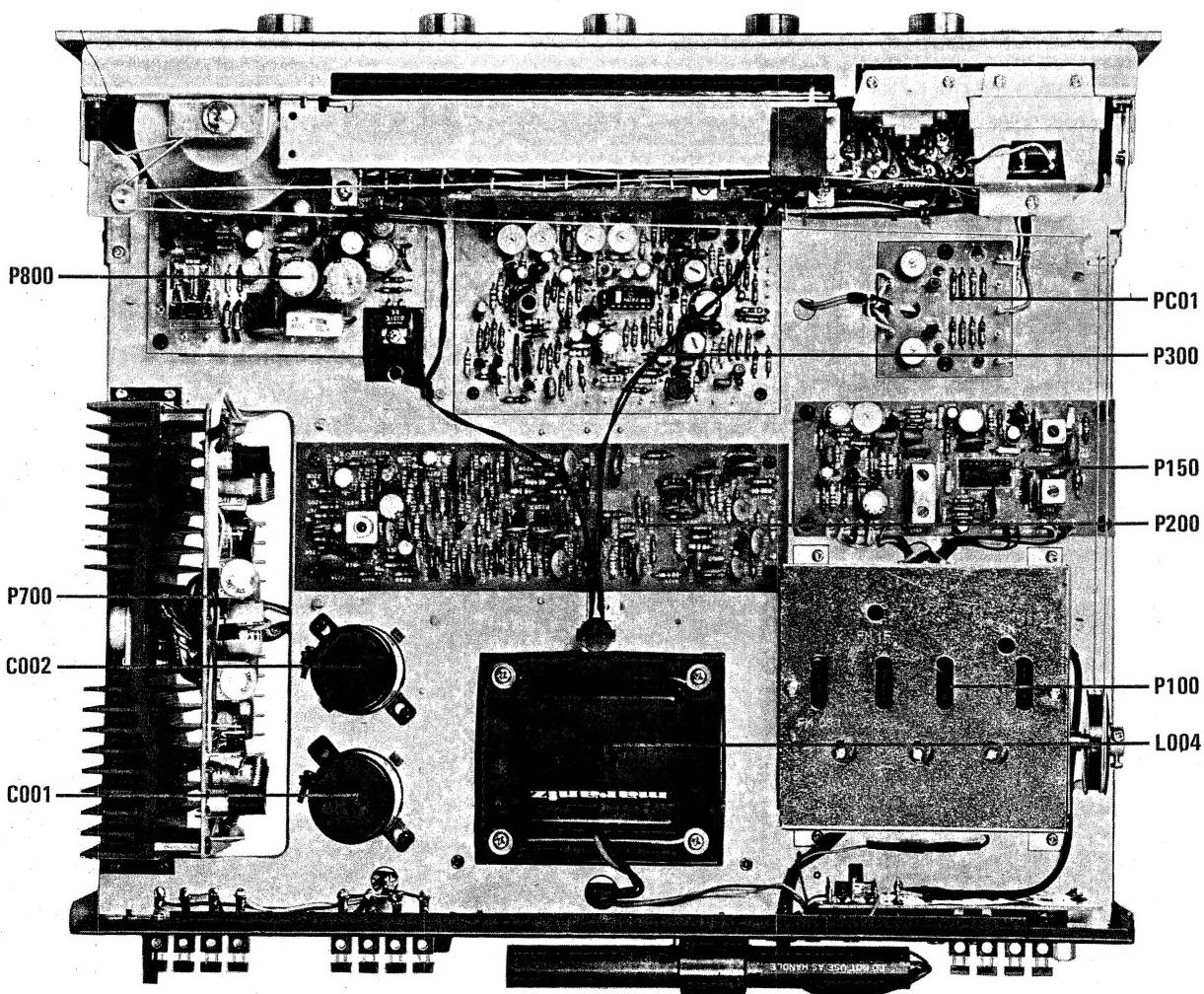


Figure 3. Main Chassis Component Locations (Top View)

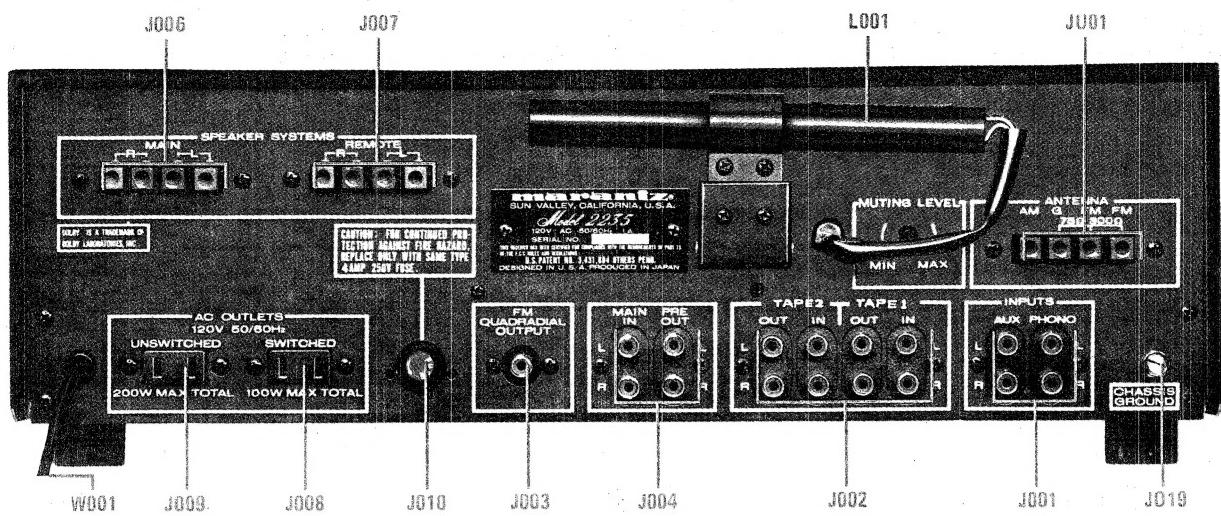


Figure 4. Rear Panel Jacks and Component Locations

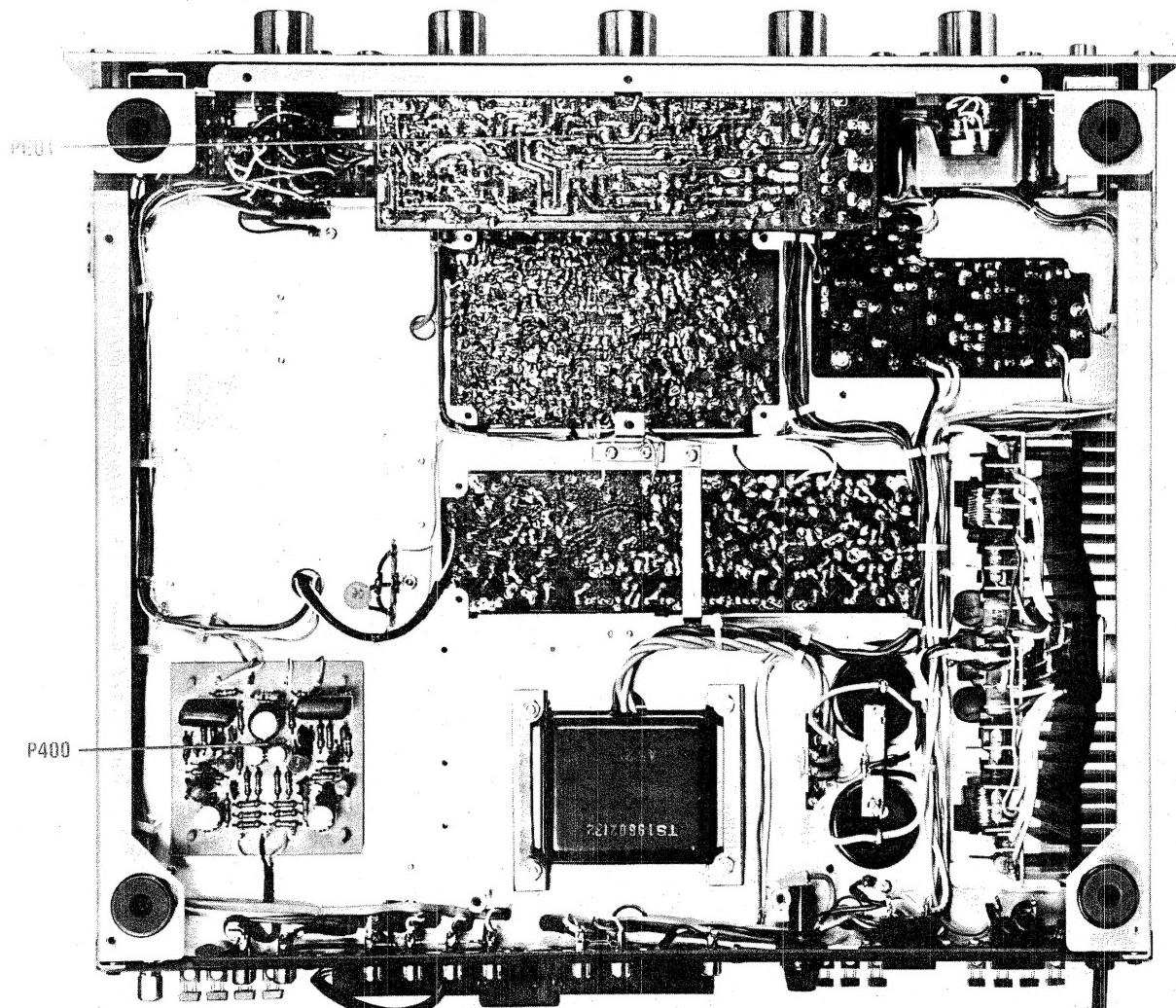


Figure 5. Main Chassis Component Locations (Bottom View)

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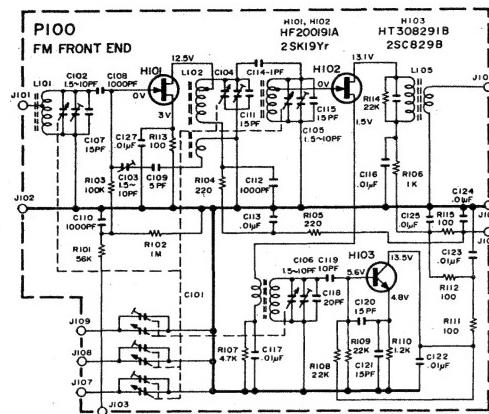


Figure 6. P100 Circuit Diagram

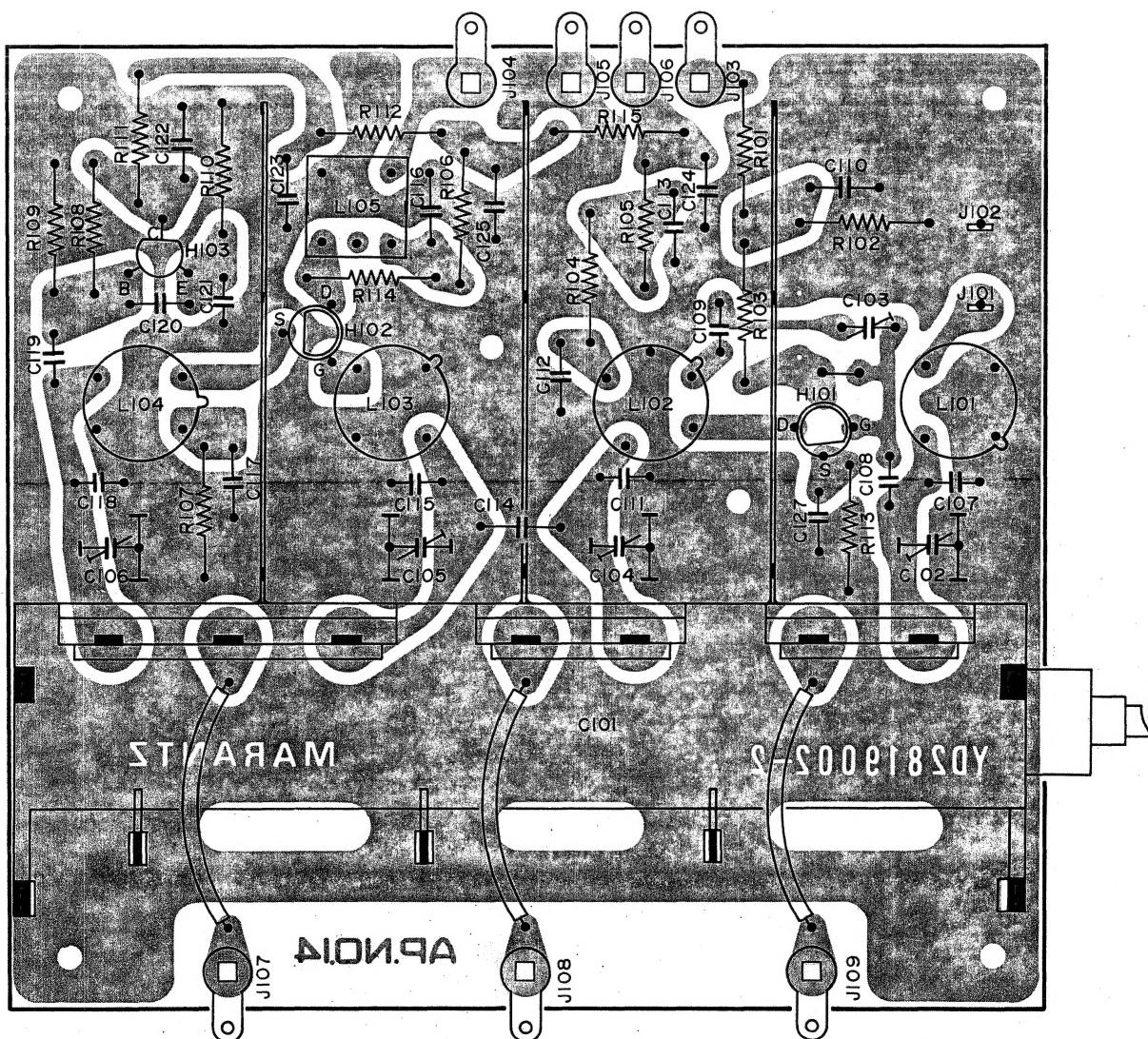
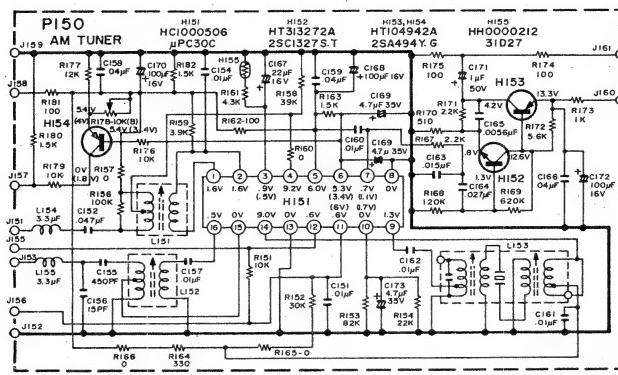


Figure 7. FM Front End Board – P100 Component Assembly Diagram



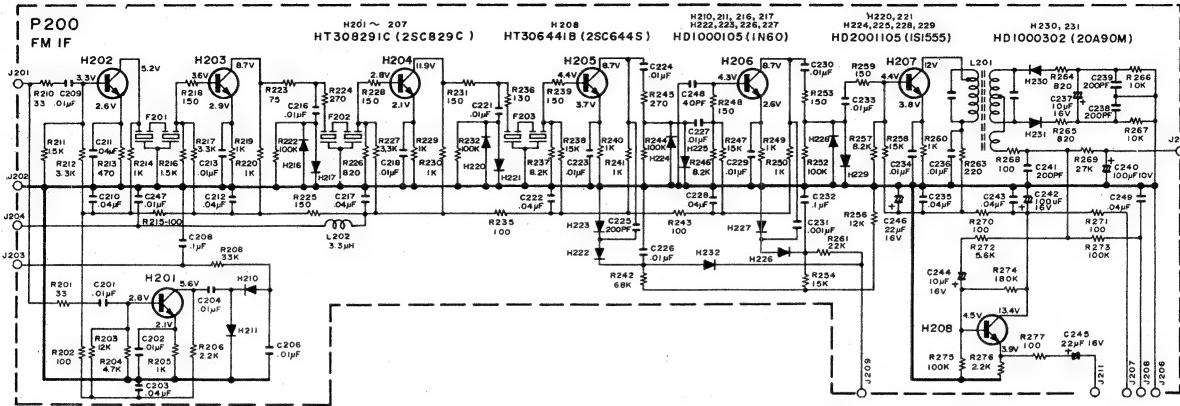


Figure 10. P200 Circuit Diagram

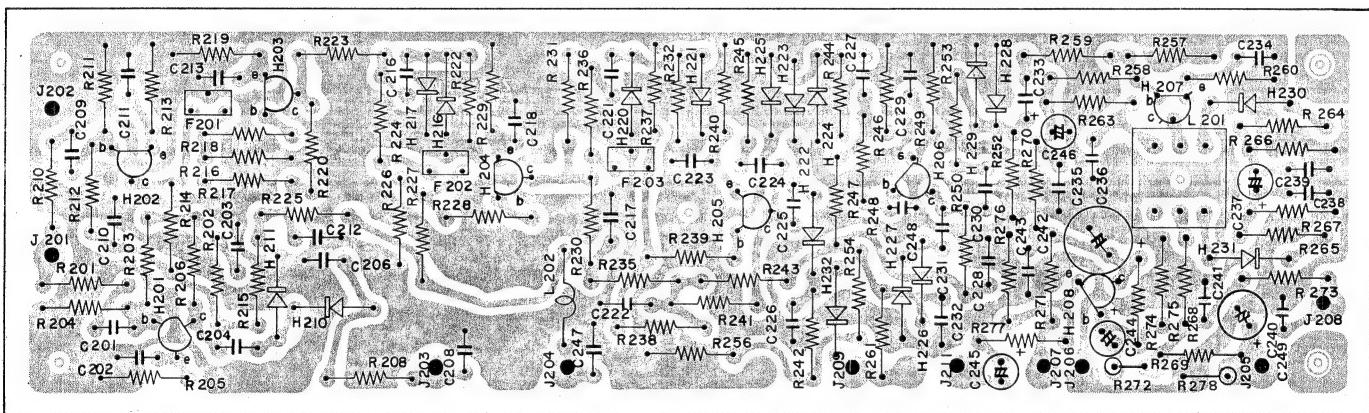


Figure 11. FM IF and Detector Board – P200 Component Assembly Diagram

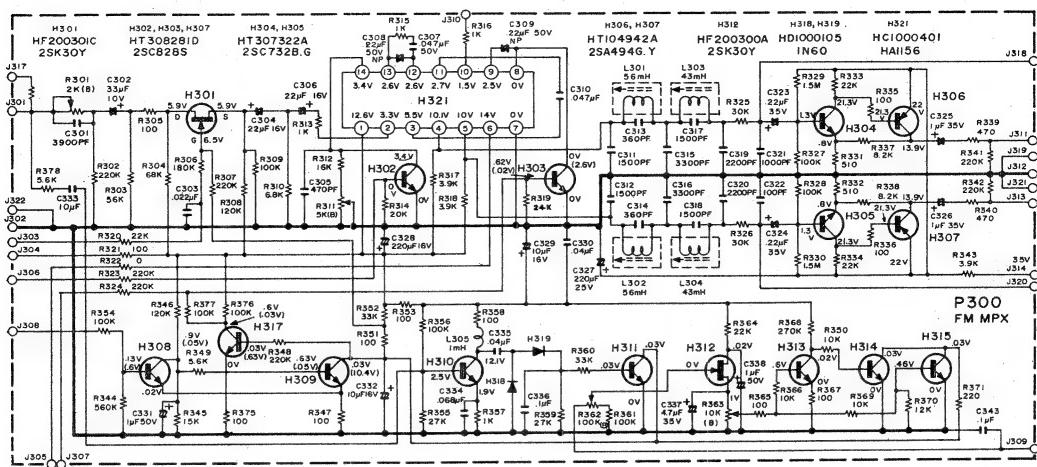


Figure 12. P300 Circuit Diagram

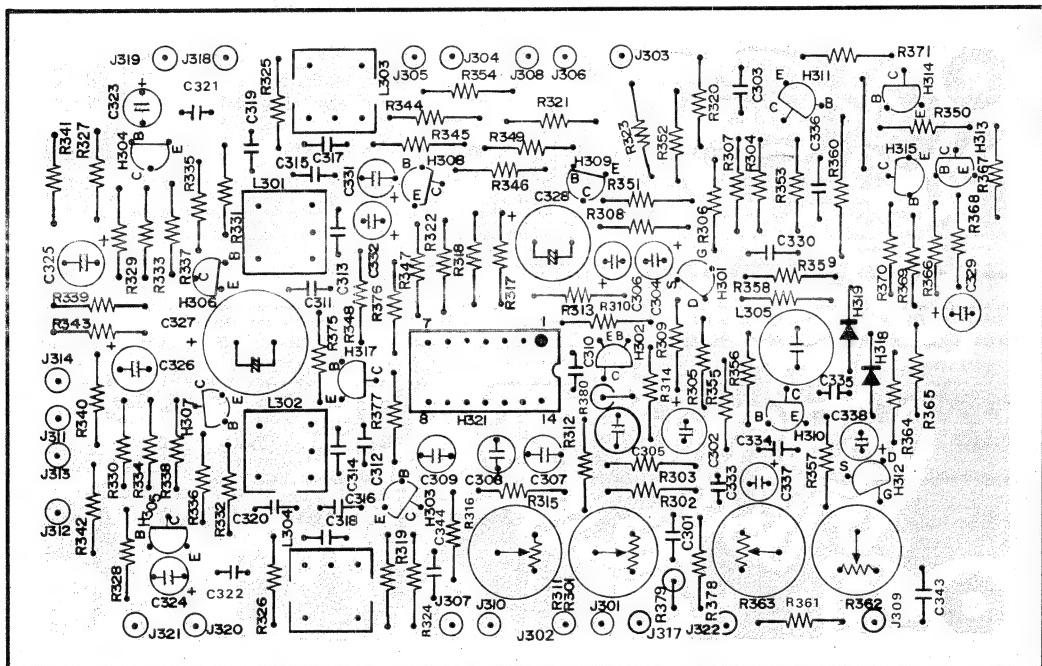


Figure 13. FM Multiplex and Muting Board – P300 Component Assembly Diagram

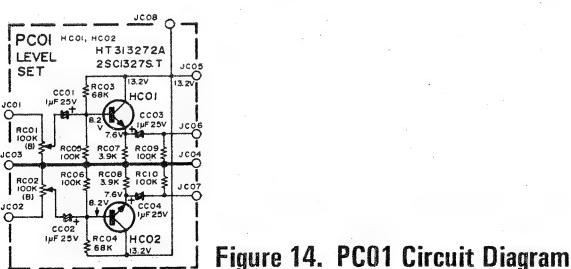


Figure 14. PC01 Circuit Diagram

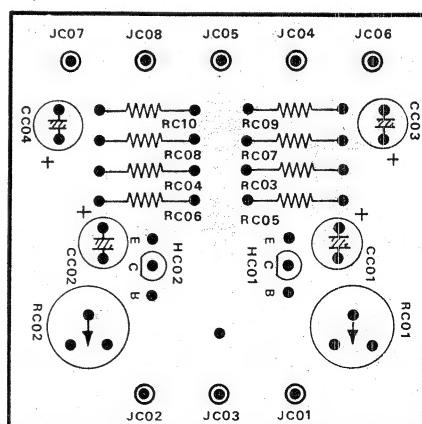


Figure 15. Dolby Level Board – PC01 Component Assembly Diagram

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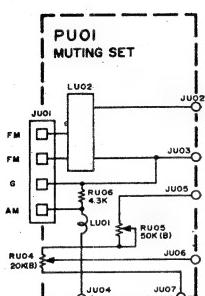


Figure 16. PU01 Circuit Diagram

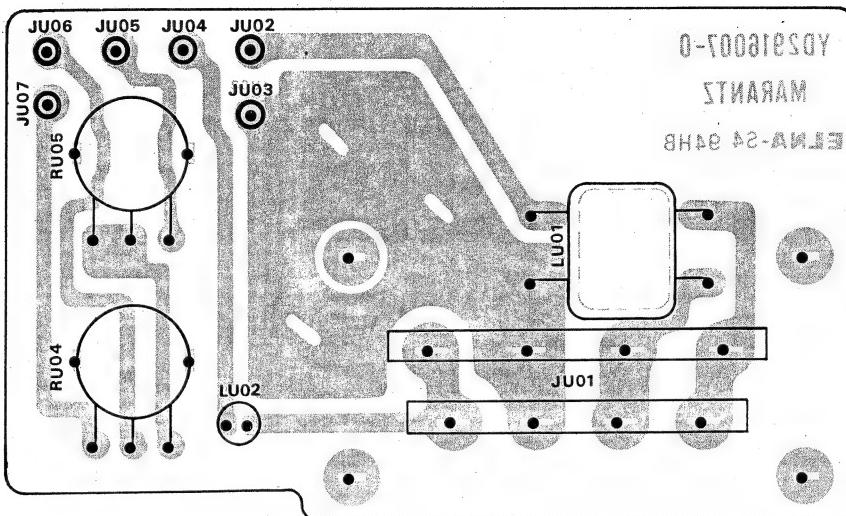


Figure 17. Antenna Muting Board – PU01 Component Assembly Diagram

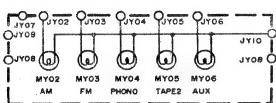


Figure 18. PY01 Circuit Diagram

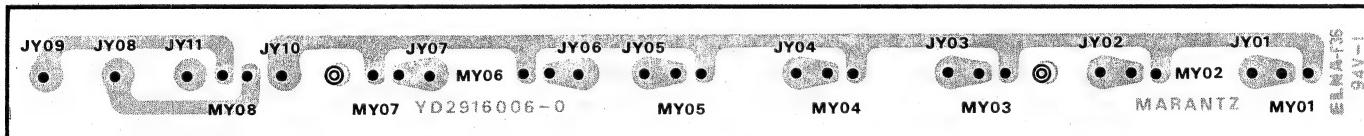


Figure 19. Function Lamp Board – PY01 Component Assembly Diagram

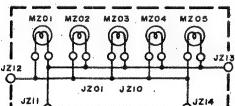


Figure 20. PZ01 Circuit Diagram

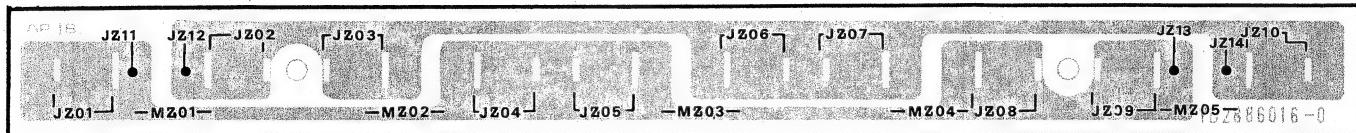


Figure 21. Dial Lamp Board – PZ01 Component Assembly Diagram

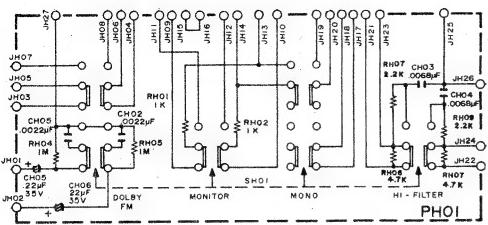


Figure 22. PH01 Circuit Diagram

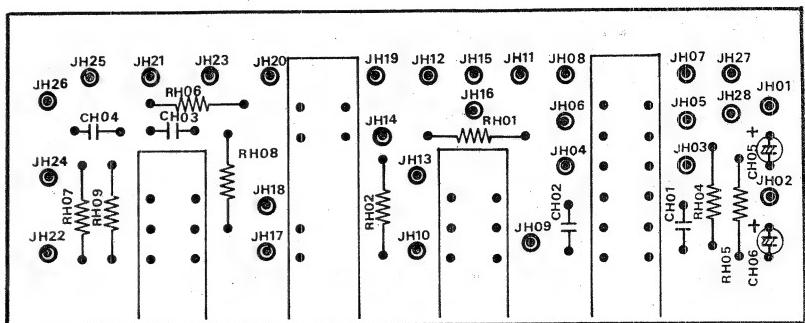


Figure 23. Dolby FM, Monitor, Mono and Hi Filter Switch Board – PH01 Component Assembly Diagram

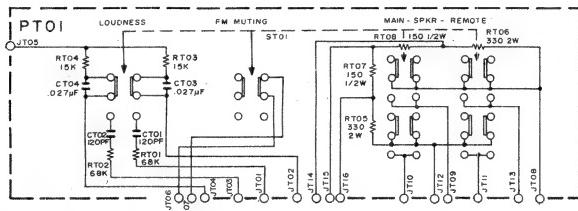


Figure 24. PT01 Circuit Diagram

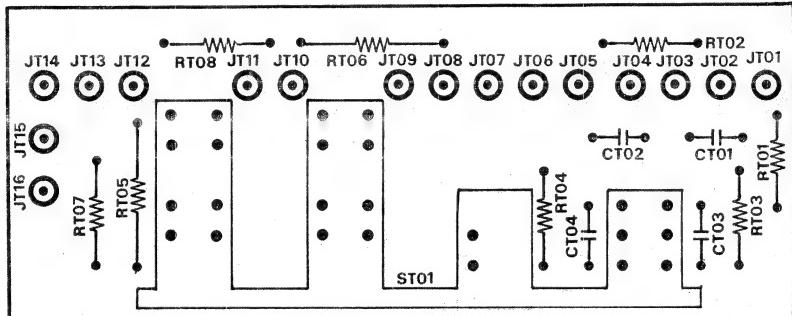


Figure 25. Loudness, FM Muting, Main and Remote Speaker Switch Board – PT01 Component Assembly Diagram

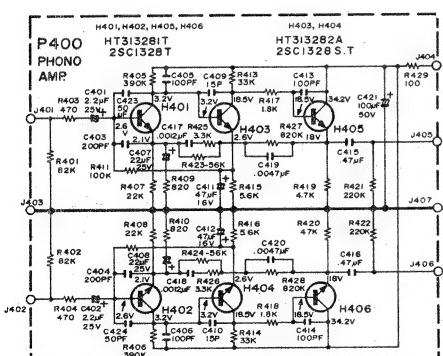


Figure 26. P400 Circuit Diagram

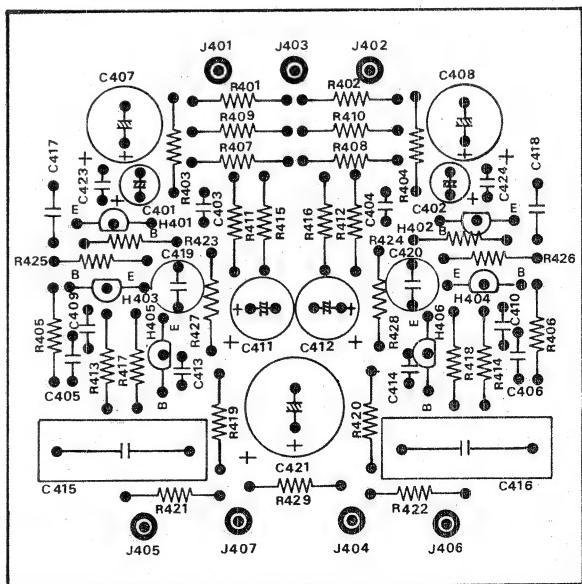


Figure 27. Phono Amplifier Board – P400 Component Assembly Diagram

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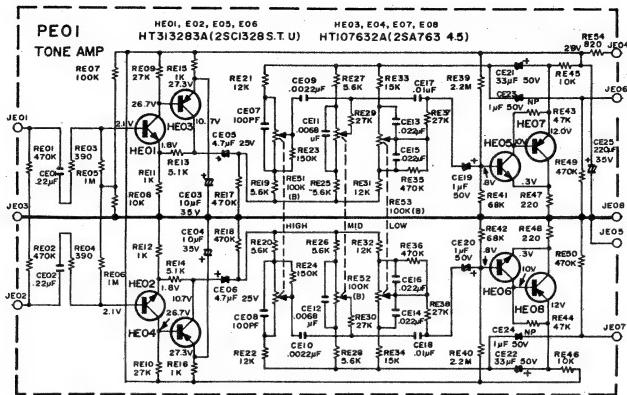


Figure 28. PE01 Circuit Diagram

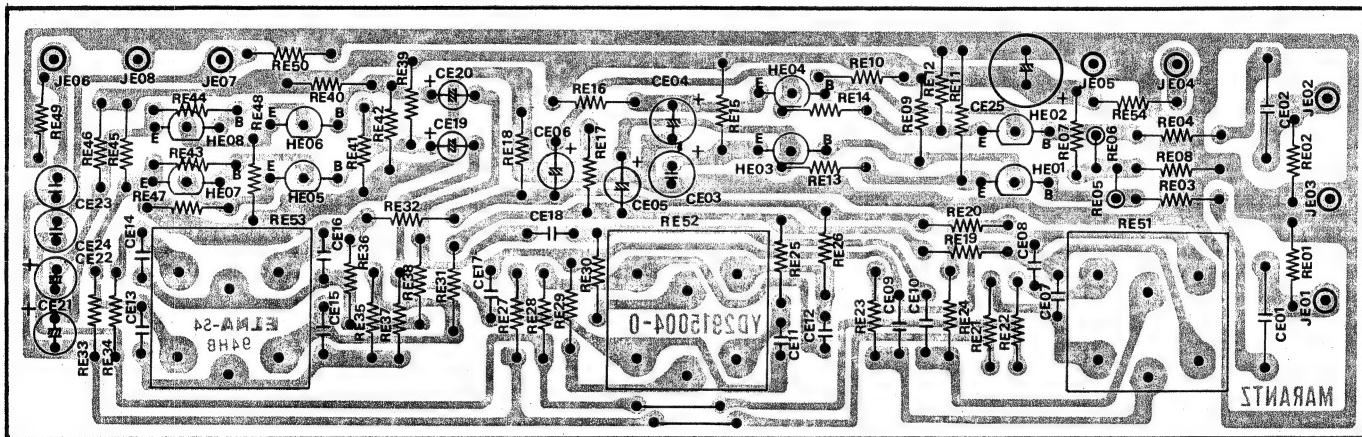


Figure 29. Pre and Tone Amplifier Board – PE01 Component Assembly Diagram

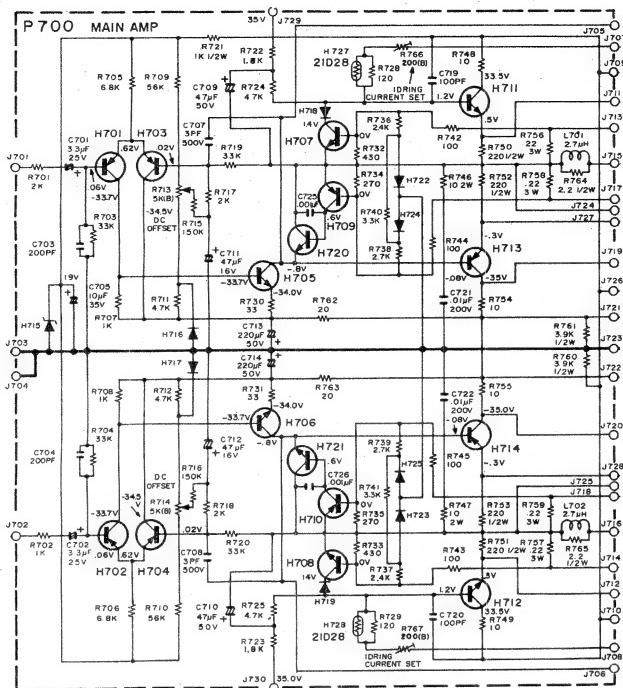


Figure 30. P700 Circuit Diagram

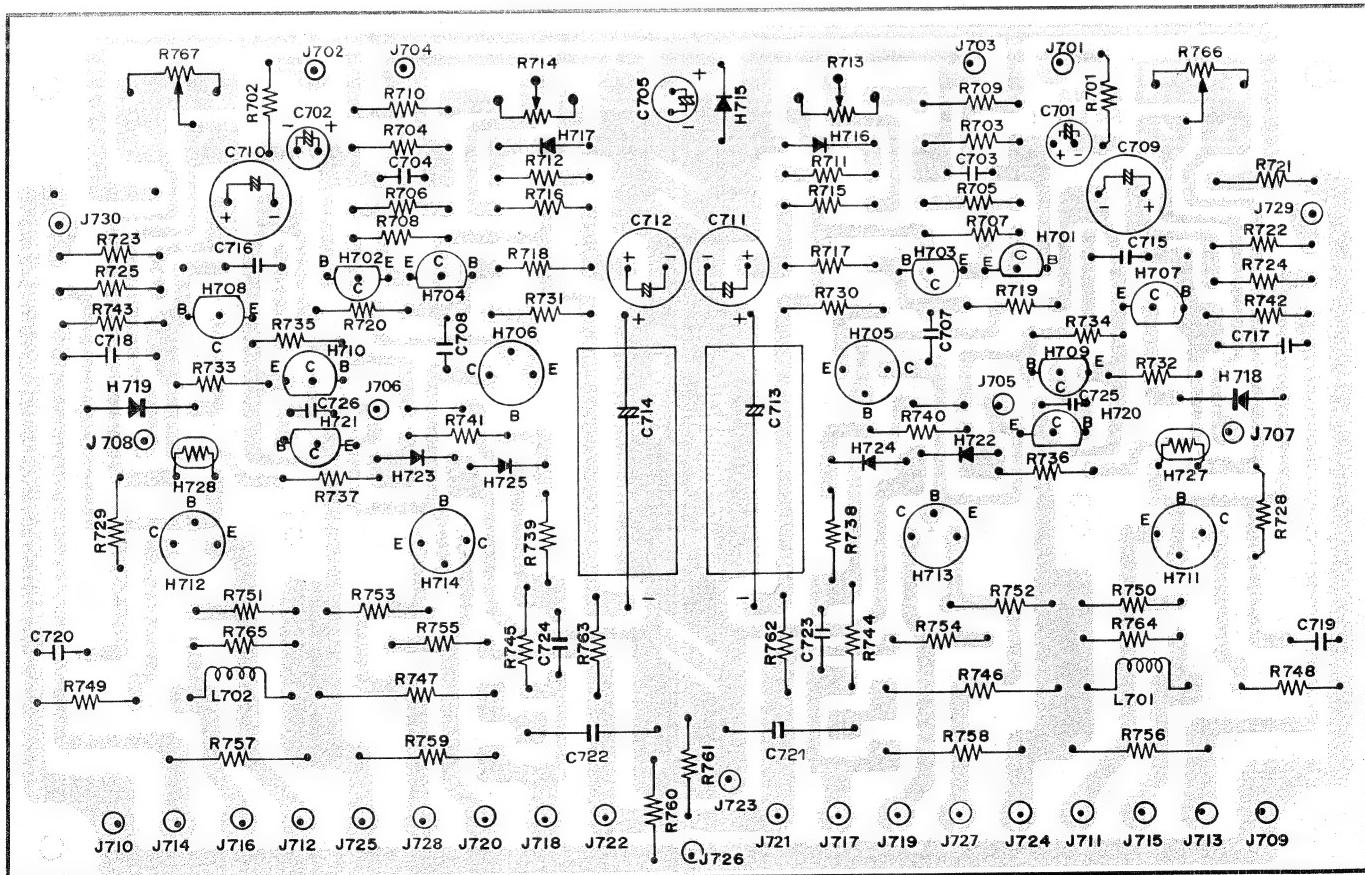


Figure 31. Main Amplifier Board – P700 Component Assembly Diagram

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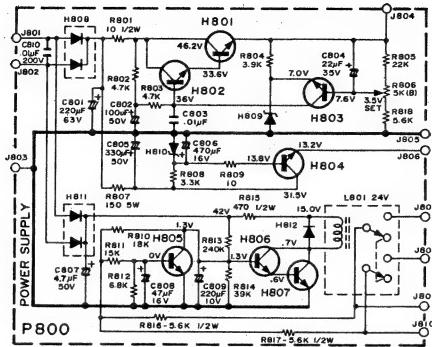


Figure 32. P800 Circuit Diagram

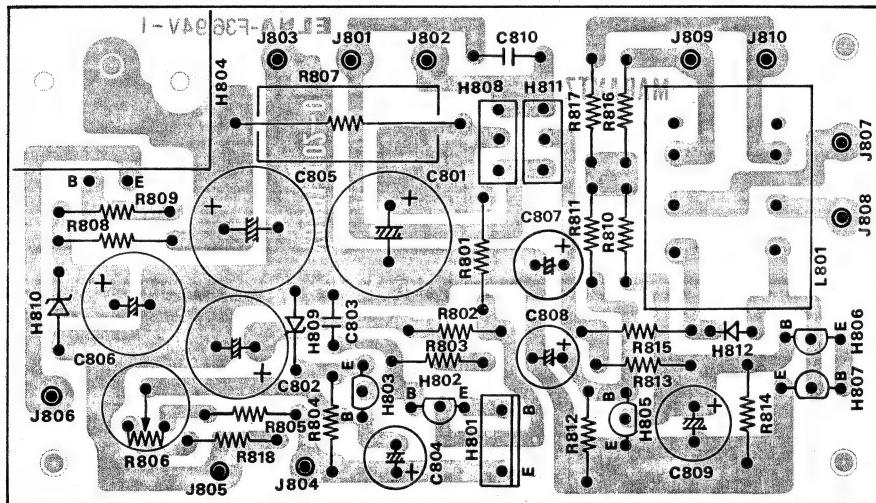


Figure 33. Power Supply Board – P800 Component Assembly Diagram

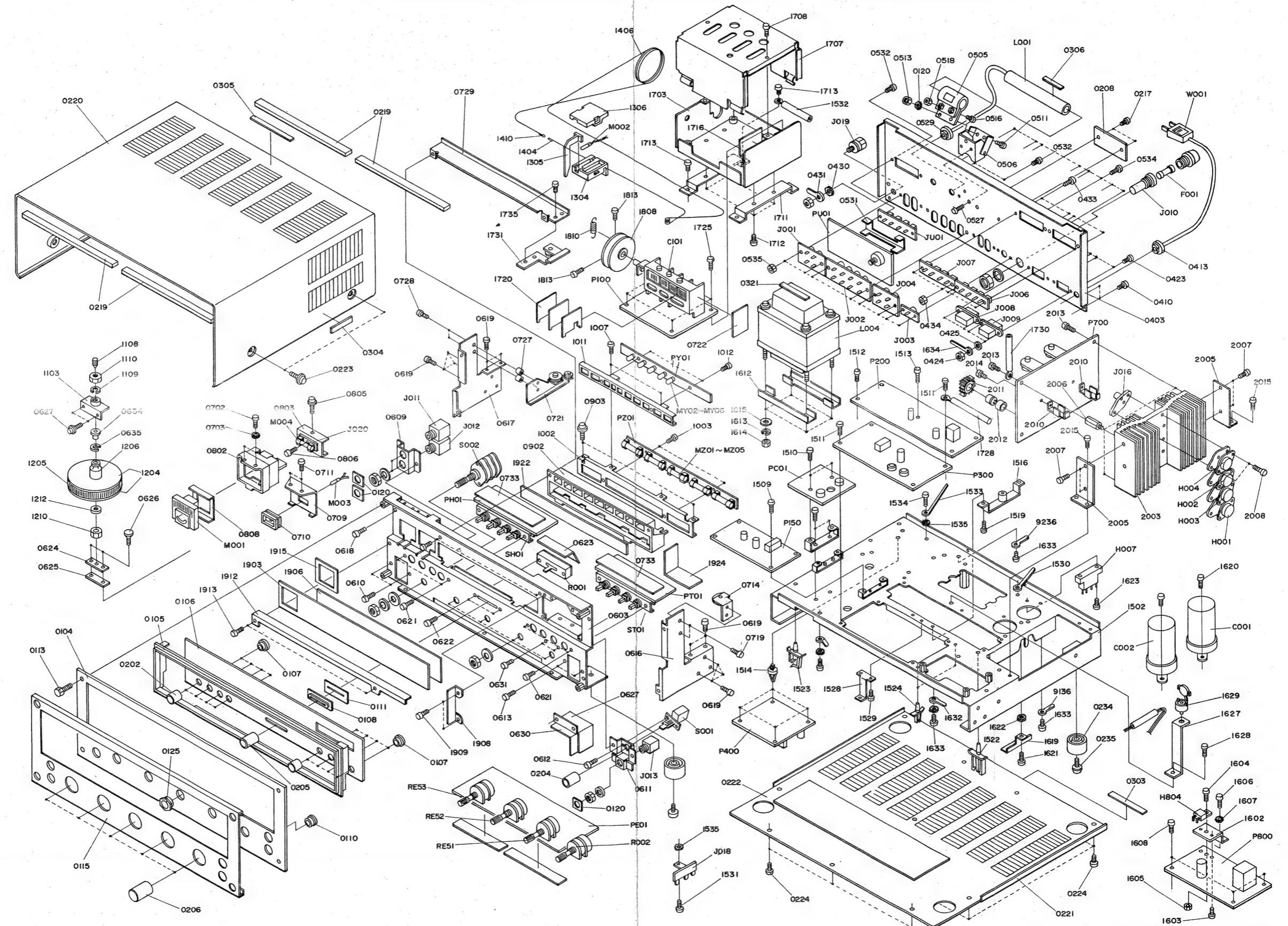


Figure 34. Exploded Mechanical Diagram

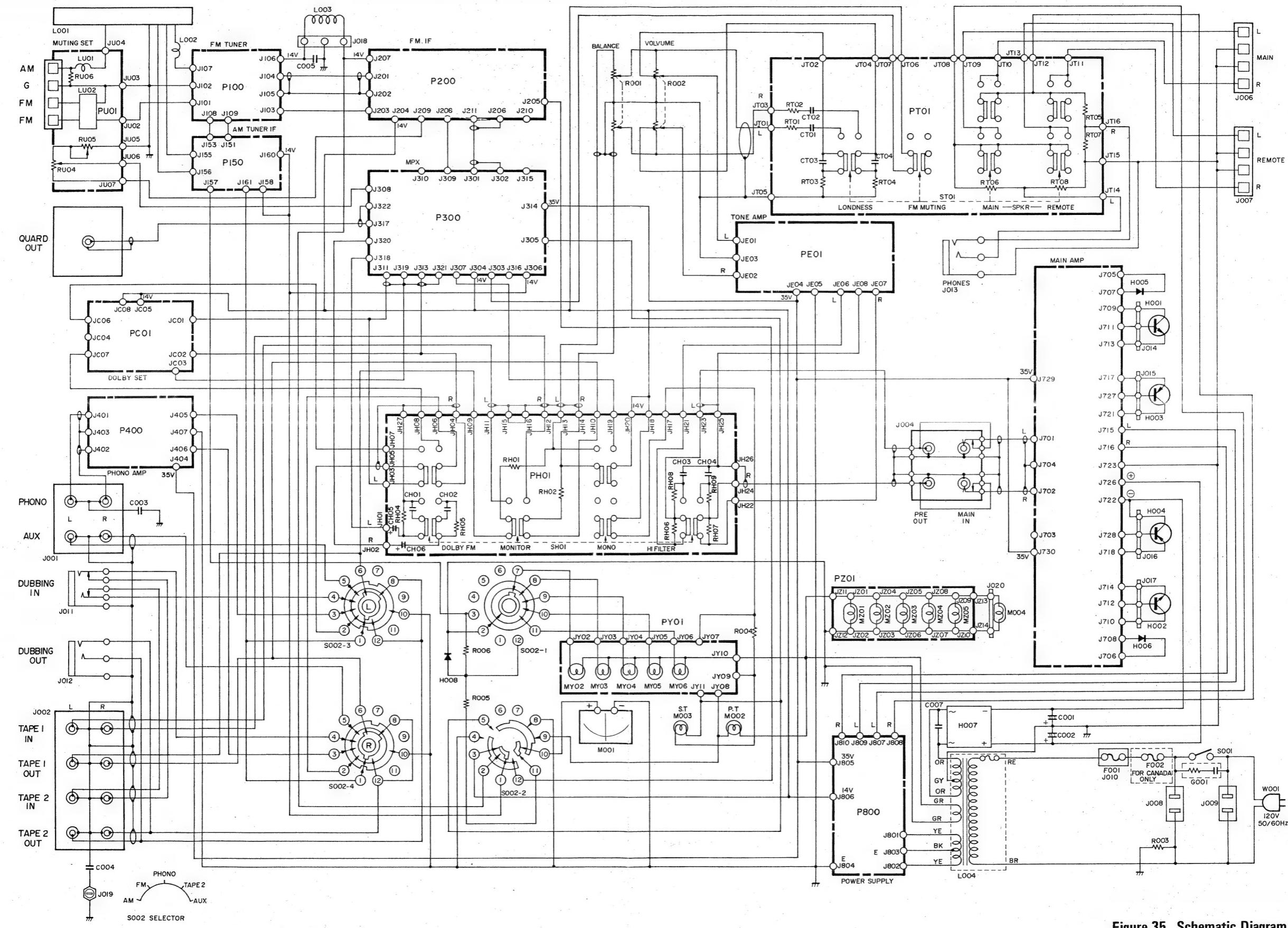


Figure 35. Schematic Diagram

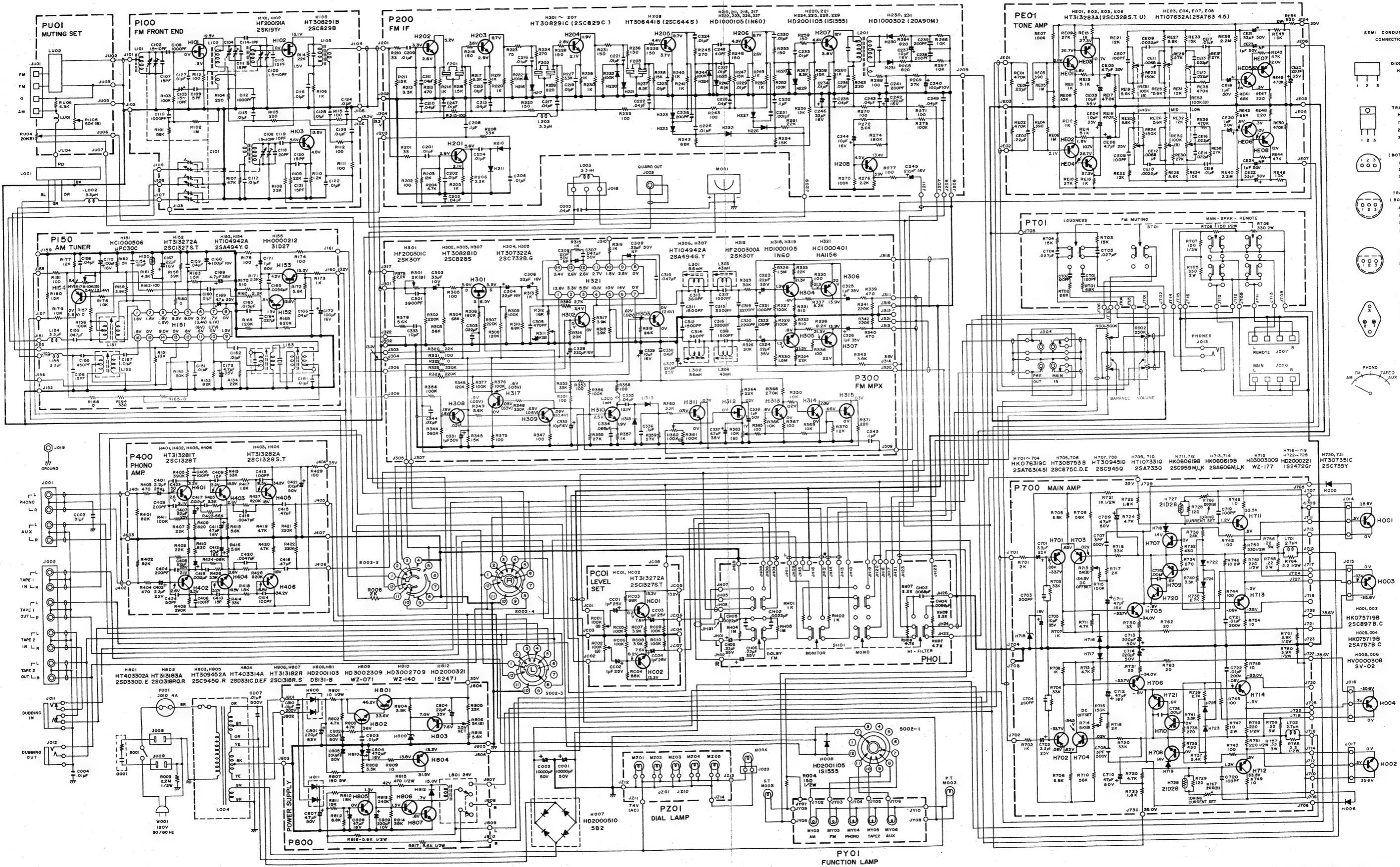


Figure 36. Circuit Diagram

MODEL 2235

NOTE: This circuit diagram applies to units manufactured for the U.S.A. market.

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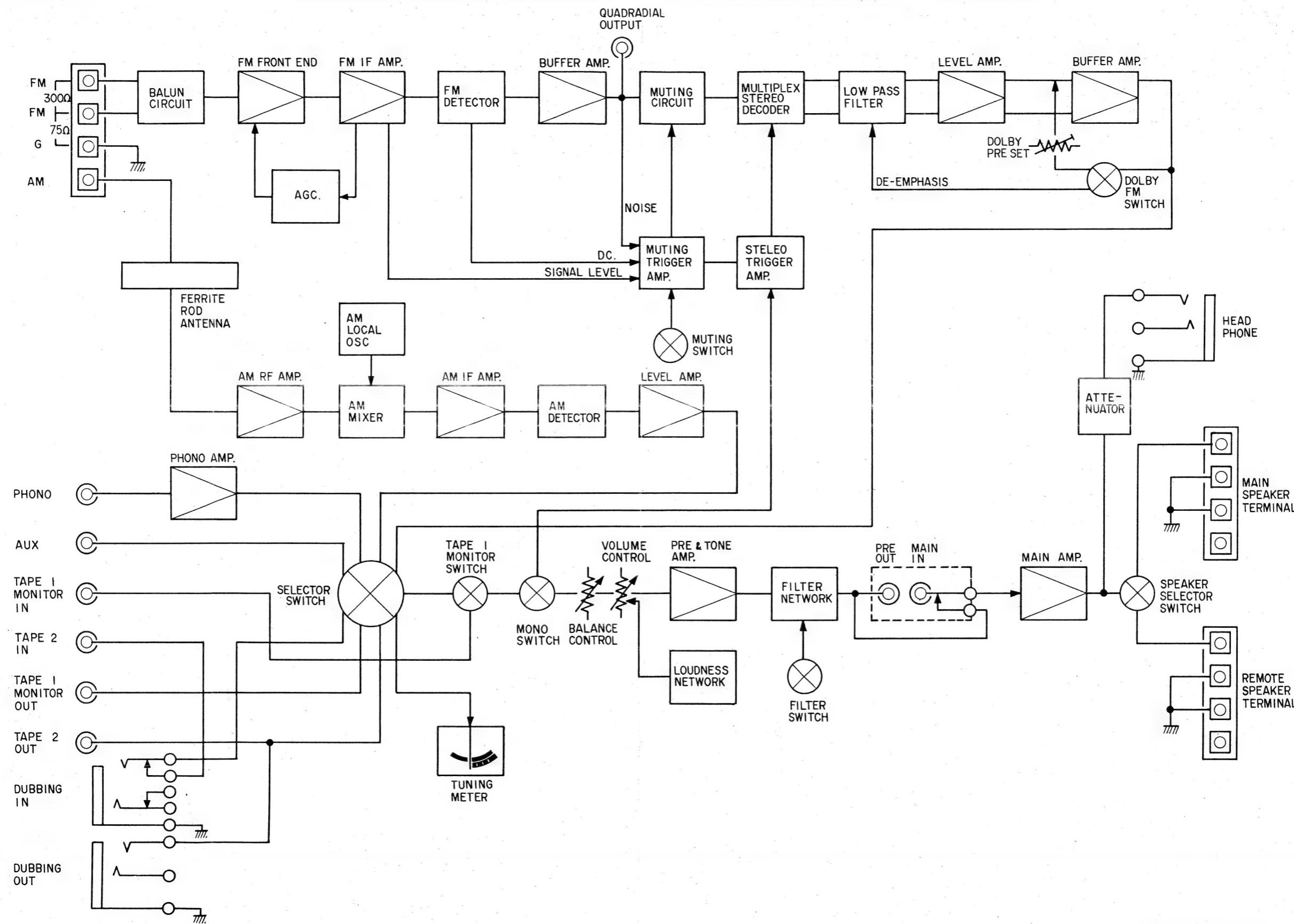


Figure 37. Block Diagram

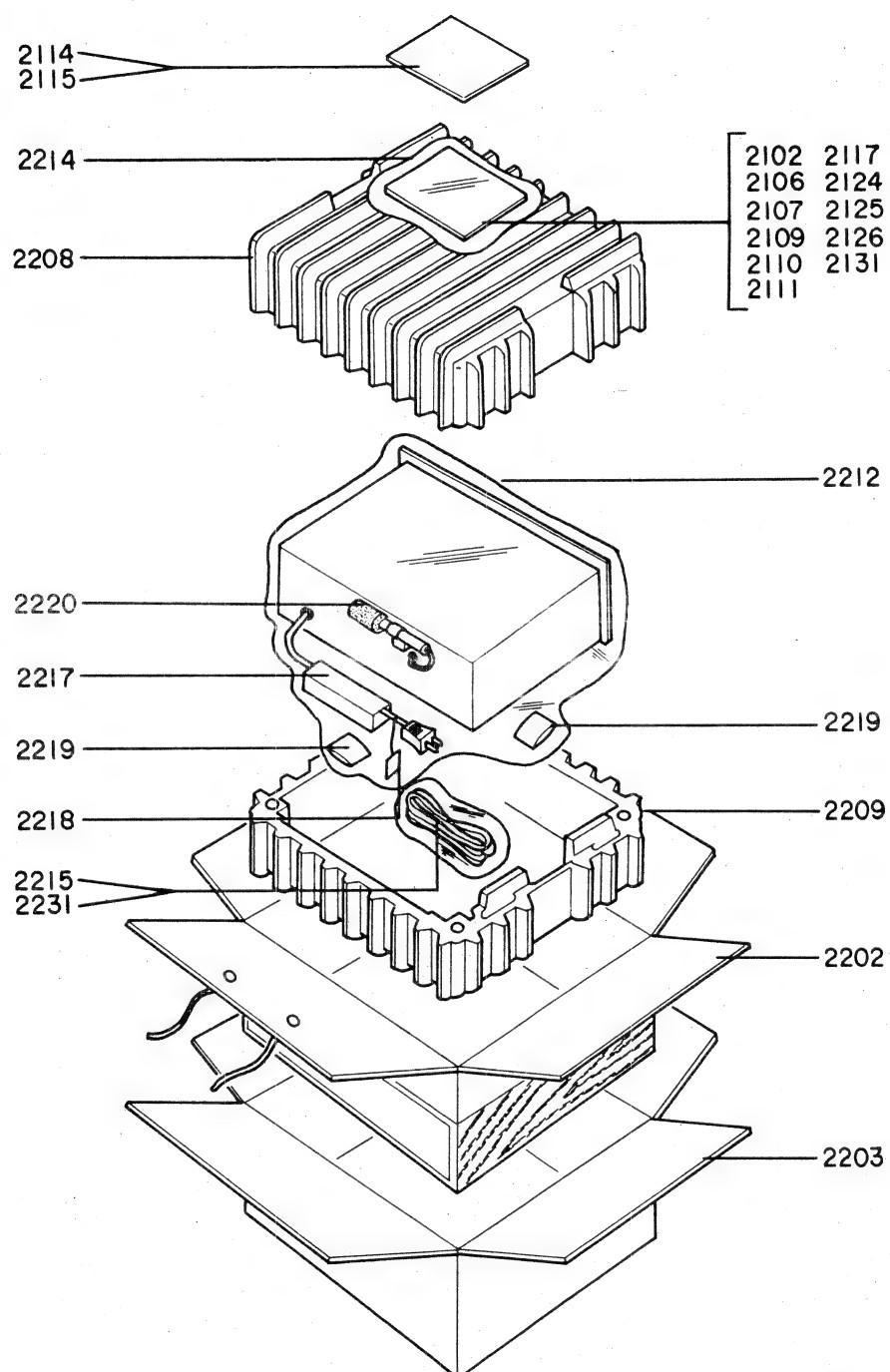


Figure 38. Packing

10. PARTS LIST

U: For U.S.A.
 C: For Canada
 E: For Europe

REF. DESIG.	QTY.			PART NO.	DESCRIPTION
	U	C	E		
A	1	1	1	292706340	Front Panel Assembly
0104	1	1	1	292706301	Escutcheon
0105	1	1	1	285340101	Frame
0106	1	1	1	291515801	Window
0107	9	9	9	288625901	Bush
0108	1	1	1	285425901	Bush
0111	1	1	1	291510701	Sheet
0115	1	1	1	291605301	Cover
0120	3	3	3	289610701	Sheet
B	1	1	1	285327340	Fly Wheel Assembly
1204	2	2	2	257706302	Escutcheon
1205	1	1	1	257727301	Fly Wheel
1206	1	1	1	285311201	Shaft
1210	1	1	1	53110603E	Hexagon Nut
1212	1	1	1	54020601E	Flat Washer P
M002	1	1	1	IN1008030	Lamp
C	1	1	1	291510340	Pointer Assembly
1304	1	1	1	291510301	Pointer
1305	1	1	1	281810302	Pointer
1306	1	1	1	291510302	Pointer
D	1	1	1	120200640	Hook Assembly
1404	1	1	1	120225801	Hook
1406	1	1	1	72080802A	String
E	1	1	1	281915943	Drum Assembly
1808	1	1	1	281915901	Drum
1810	1	1	1	71101689L	Spring
1813	2	2	2	51064019A	Set Screw
F	1	1	1	281825740	Top Lid Assembly
0219	1	1	1	257711807	Spacer
0220	1	1	1	281825701	Lid
G	1	1	1	281825741	Bottom Lid Assembly
0221	1	1	1	281825702	Lid
0222	1	1	1	291512001	Insulator
H	1	1	1	292716040	Rear Panel Assembly
0405	1	1	1	292716022	Bracket
0414	1	1	1	284906702	Cap
0416	1	1	1	282125901	Bush
0417	2	2	2	55060305S	T.R. Rivet
0125	1	1	1	292705501	Collar
0202	8	8	8	288615403	Knob, Pushswitch
0204	1	1	1	290415404	Knob, Power
0205	1	1	1	285015401	Knob, Slide Volume
0206	5	5	5	281815403	Knob, Single
0208	1	1	1	292726501	Indicator, Name Plate
0209	1	1	1	292726502	Indicator, Name Plate
0210	1	1	1	292726503	Indicator, Name Plate
0217	2	2	2	51060306S	B.H.M. Screw, B3x6

REF. DESIG.	QTY.			PART NO.	DESCRIPTION
	U	C	E		
0219	4	4	4	257711807	Spacer
0220	1	1	1	281825701	Lid
0221	1	1	1	281825702	Lid
0222	1	1	1	291512001	Insulator
0223	4	4	4	51480406S	B.H.M. Screw F, B4x6
0224	10	10	10	51100406S	B.H.M. Screw, B4x6
0234	4	4	4	293205701	Leg
0235	4	4	4	51440410S	B.H.M. Screws S, B4x10
0303	1	1	1	257886101	Label, UL Caution
0304	1	1	1	257886102	Label, Do not remove cover.
0305	1	1	1	257886103	Label, See marking on bottom.
0306	1	1	1	250626506	Indicator, Do not use as handle.
0311	1	1	1	951091101	Label, LL No.
0312	1	1	1	282186102	Label, Fuse Caution
0313	1	1	1	951091102	Label, UL Factory Code
0316	1	1	1	951110102	Label, UL
0321	1	1	1	288686101	Label, On Transformer
0323	1	1	1	951022101	Label, Fuse Caution
0403	1	1	1	292716009	Bracket
0410	6	6	6	51060306S	B.H.M. Screw, B3x6
0413	1	1	1	145525903	Bush, Power Code
0418	2	2	2	54050300R	T.L. Washer OR
0419	2	2	2	51060316A	P.H.M. Screw, P3x16
0420	2	2	2	53110303A	Hexagon Nut
0423	4	4	4	51060308S	B.H.M. Screw, B3x8
0424	4	4	4	53110303A	Hexagon Nut
0425	4	4	4	54050300R	T.L. Washer OR
0430	1	1	1	54050400R	T.L. Washer OR
0431	1	1	1	62041760W	Lug
0433	4	4	4	51060308S	B.H.M. Screw, B3x8
0434	4	4	4	53110303A	Hexagon Nut
0505	1	1	1	281927103	Holder, Antenne
0506	1	1	1	257816052	Bracket K
0511	2	2	2	51060310S	B.H.M. Screw, B3x10
0512	2	2	2	54050300R	T.L. Washer OR
0513	2	2	2	53110303E	Hexagon Nut
0516	2	2	2	51060310S	B.H.M. Screw, B3x10
0518	2	2	2	53110303E	Hexagon Nut
0527	3	3	3	51100306S	B.H.M. Screw, B3x6
0529	1	1	1	145525903	Bush
0531	1	1	1	291616005	Bracket
0532	2	2	2	51060306S	B.H.M. Screw, B3x6
0534	8	8	8	51060308S	B.H.M. Screw, B3x8
0535	8	8	8	53110303A	Hexagon Nut
0603	1	1	1	291516050	Bracket K
0609	1	1	1	291616002	Bracket
0610	2	2	2	51100306A	B.H.M. Screw, B3x6
0611	1	1	1	291616003	Bracket
0612	2	2	2	51060306A	P.H.M. Screw, P3x6
0613	2	2	2	51100306A	P.H.M. Screw, P3x6
0616	1	1	1	281816003	Bracket
0617	1	1	1	281816004	Bracket
0618	4	4	4	51100406A	B.H.M. Screw, B4x6
0619	10	10	10	51570306B	P.H. Tapped Screw, P3x6ST
0621	4	4	4	51100306A	B.H.M. Screw, B3x6
0622	2	2	2	51100306A	B.H.M. Screw, B3x6
0623	1	1	1	291512002	Insulator
0624	1	1	1	257710602	Bearing
0625	1	1	1	141511801	Spacer

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY.			PART NO.	DESCRIPTION	REF. DESIG.	QTY.			PART NO.	DESCRIPTION
	U	C	E				U	C	E		
0626	2	2	2	51040306A	F.H.M. Screw, F3x6	1604	1	1	1	51100310E	B.H.M. Screw, B3x10
0627	2	2	2	51470306A	B.H.M. Screw FS	1605	1	1	1	53110301E	Hexagon Nut
0629	1	1	1	291510903	Shield	1606	1	1	1	51570306S	P.H. Tapped Screw, P3x6ST
0630	2	2	2	291512003	Insulator	1607	1	1	1	54050300R	T.L. Washer OR
0631	2	2	2	51100305A	B.H.M. Screw, B3x5	1608	3	3	3	51100306S	B.H.M. Screw, B3x6
0634	1	1	1	285011202	Shaft	1612	2	2	2	292700501	Clamper
0635	1	1	1	54040402N	Spring Washer	1613	4	4	4	54040402A	Spring Washer
						1614	4	4	4	53110401A	Hexagon Nut
0702	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST	1615	4	4	4	54020401A	Flat Washer P
0703	2	2	2	54050300R	T.L.Washer OR	1619	1	1	1	292716004	Bracket
0706	2	2	2	51042608A	F.H.M. Screw, F2.6x8	1620	4	4	4	51570306S	P.H. Tapped Screw, P3x6ST
0709	1	1	1	291516004	Bracket	1621	1	1	1	51570306B	P.H. Tapped Screw, P3x6ST
0710	1	1	1	291225901	Bush	1622	1	1	1	54050300R	T.L. Washer OR
0711	2	2	2	51570305B	P.H.Tapped Screw, P3x5ST	1623	2	2	2	51570310B	P.H. Tapped Screw, P3x10ST
0714	1	1	1	291626251	Pulley K	1627	1	1	1	292716005	Bracket
0719	2	2	2	51100306A	B.H.M. Screw, B3x6	1628	1	1	1	51570306B	P.H. Tapped Screw, P3x6ST
0721	1	1	1	292726251	Pulley K	1629	1	1	1	290825901	Bush
0728	2	2	2	51100306A	B.H.M. Screw, B3x6	1632	1	1	1	62030039W	Lug
0729	1	1	1	287105102	Guide	1633	4	4	4	51570306B	P.H. Tapped Screw, P3x6ST
0733	1	1	1	288612002	Insulator	1634	1	1	1	138200503	Clamper
0802	1	1	1	285427401	Reflector	1703	1	1	1	273010950	Shield K
0803	1	1	1	285427101	Holder	1707	1	1	1	273010902	Shield
0805	1	1	1	51480306A	B.H.M. Screw F	1708	2	2	2	51100306B	B.H.M. Screw, B3x6
0806	1	1	1	51570305B	P.H.Tapped Screw, P3x5ST	1711	2	2	2	292716006	Bracket
0808	1	1	1	288610701	Sheet	1712	4	4	4	51100306B	B.H.M. Screw, B3x6
0902	1	1	1	287127401	Reflector	1713	4	4	4	51570306B	P.H. Tapped Screw, P3x6ST
0903	2	2	2	51480306A	B.H.M. Screw F	1716	1	1	1	291612003	Insulator
1002	1	1	1	287127101	Holder	1720	3	3	3	273010903	Shield
1003	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST	1722	1	1	1	341105605	Buffer
1007	2	2	2	51100306A	B.H.M. Screw, B3x6	1725	5	5	5	51100306S	B.H.M. Screw, B3x6
1011	1	1	1	288627101	Holder	1728	1	1	1	138200503	Clamper
1012	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST	1730	1	1	1	138200503	Clamper
1103	1	1	1	285310650	Bearing K	1731	1	1	1	291726250	Pulley K
1108	1	1	1	51640410D	Set Screw C P	1735	2	2	2	51100306A	B.H.M. Screw, B3x6
1109	1	1	1	54040402N	Spring Washer	1903	1	1	1	292730201	Dial
1110	1	1	1	53110403E	Hexagon Nut	1906	1	1	1	285310701	Sheet
1410	1	1	1	56382540G	Eyelet, Dial String	1908	1	1	1	285326901	Protector
1502	1	1	1	292710550	Chassis K	1909	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST
1509	4	4	4	51100306S	B.H.M. Screw, B3x6	1912	1	1	1	291526901	Protector
1510	2	2	2	51100306S	B.H.M. Screw, B3x6	1913	2	2	2	51570305B	P.H. Tapped Screw, P3x5ST
1511	4	4	4	51570306S	P.H. Tapped Screw, P3x6ST	1915	1	1	1	287105302	Cover
1512	4	4	4	51570306S	P.H. Tapped Screw, P3x6ST	1922	1	1	1	288612201	Sticker
1513	1	1	1	51100306S	B.H.M. Screw, B3x6	1924	1	1	1	281912005	Insulator
1514	4	4	4	389610101	Support	1951	1			951061105	Label, 5A
1516	1	1	1	292710450	Retainer K	2003	1	1	1	289026701	Heat Sink
1519	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST	2005	2	2	2	289016003	Bracket
1522	2	2	2	288600503	Clamper	2006	4	4	4	281810104	Support
1523	5	5	5	288600502	Clamper	2007	4	4	4	51380305T	R.H. Tapped Screw, R3x5ST
1524	4	4	4	288600505	Clamper	2008	8	8	8	51100316E	B.H.M. Screw, B3x16
1528	1	1	1	292716003	Bracket	2010	2	2	2	289026703	Heat Sink
1529	2	2	2	51570306B	P.H. Tapped Screw, P3x6ST	2011	4	4	4	289226703	Heat Sink
1530	1	1	1	282100501	Clamper	2012	6	6	6	281811806	Spacer
1531	1	1	1	51570306B	P.H. Tapped Screw, P3x6ST	2013	4	4	4	51100306S	B.H.M. Screw, B3x6
1532	1	1	1	138200503	Clamper	2014	2	2	2	51100204A	B.H.M. Screw, B3x6
1533	1	1	1	287100501	Clamper	2015	4	4	4	51570306B	P.H. Tapped Screw, P3x6ST
1534	1	1	1	51570306B	P.H. Tapped Screw, P3x6ST	2019				288816005	Bracket
1535	2	2	2	54050300R	T.L. Washer OR	2020				51570306B	P.H. Tapped Screw, P3x6ST
1602	1	1	1	291626702	Heat Sink	2021				51100306S	B.H.M. Screw, B3x6
1603	2	2	2	51102606S	B.H.M. Screw, B2.6x6	2022				292710901	Shield
						2023				285612001	Insulator

U: For U.S.A.
 C: For Canada
 E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
2024		2	51570305B	P.H. Tapped Screw, P3x5ST	
2026		1	292716007	Bracket	
2027		2	51570306B	P.H. Tapped Screw, P3x6ST	
2028		4	51570312B	P.H. Tapped Screw, P3x6ST	
2029		5	54060300R	T.L. Washer IR	
2102	1		292785101	Instructions, Set	
2107	1		288685110	Instructions, Leaflet	
2108	1	1	292785131	Instructions, Set	
2109	1		292785601	Schematic Diagram	
2110		1	292785602	Schematic Diagram	
2111	1		292785603	Schematic Diagram	
2114	1	1	281885108	Instructions, Accessories	
2115	1		287185104	Instructions, Accessories	
2117	1	1	281885104	Instructions, Packing	
2124	1		257785401	Guarantee Card	
2125	1	1	257785102	Instructions	
2126	1		257781301	Envelope	
2131		1	281881301	Envelope	
2202	1	1	292780101	Packing Case, Inner	
2203	1	1	292780111	Packing Case, Outer	
2208	1	1	281880304	Cushion, Upper	
2209	1	1	281880305	Cushion, Lower	
2212	1	1	901483838	Polyethylene Bag, Set	
2214	1	1	901302501	Polyethylene Bag, Printed Matter	
2215	1	1	901302501	Polyethylene Bag, Accessories	
2217	1	1	102980401	Sleeve	
2218		1	956000004	Hang Tag	
2219	2	2	273182101	Silicagel	
2220	1	1	281905601	Buffer	
2222	4		952281501	Serial No. Card	
2223	4		952301512	Serial No. Card	
2224	4		952301511	Serial No. Card	
2231	1	1	ZA0200007	Ext. Antenna	
9136	1	1	62030039W	Lug	
9236	1	1	62030039W	Lug	
FM FRONT END CIRCUIT BOARD-P100					
P100	1	1	YD2819002	P.W. Board, FM Front End (Print Only)	
	1	1	ZZ2927102	P.W. Board Assembly	
P100-RESISTORS					
All resistors are $\pm 5\%$ and $\frac{1}{4}W$.					
R101	1	1	RT0556314	56K Ω	
R102	1	1	RT0510514	1M Ω	
R103	1	1	RT0510414	100K Ω	
R104	1	1	RT0522114	220 Ω	
R105	1	1	RT0522114	220 Ω	
R106	1	1	RT0510214	1K Ω	
R107	1	1	RT0547214	4.7K Ω	
R108	1	1	RT0522314	22K Ω	
R109	1	1	RT0522314	22K Ω	
R110	1	1	RT0512214	1.2K Ω	
R111	1	1	RT0510114	100 Ω	
R112	1	1	RT0510114	100 Ω	
R113	1	1	RT0510114	100 Ω	
R114	1	1	RT0522314	22K Ω	
R115	1	1	RT0510114	100 Ω	
P100-CAPACITORS					
C101	1	1	CA4330001	Variable	

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION	
C102	1	1	1	CT1100001	Trimming, 1.5~10PF	
C103	1	1	1	CT1100002	Trimming, 1.5~10PF	
C104	1	1	1	CT1100001	Trimming, 1.5~10PF	
C105	1	1	1	CT1100001	Trimming, 1.5~10PF	
C106	1	1	1	CT1100001	Trimming, 1.5~10PF	
C107	1	1	1	DD1615001	Ceramic, 15PF $\pm 10\%$	
C108	1	1	1	DK1710201	Ceramic, 1000PF $\pm 20\%$	
C109	1	1	1	DD1105001	Ceramic, 5PF $\pm 0.5\%$	
C110	1	1	1	DK1710201	Ceramic, 1000PF $\pm 20\%$	
C111	1	1	1	DD1615001	Ceramic, 15PF $\pm 10\%$	
C112	1	1	1	DK1710201	Ceramic, 1000PF $\pm 20\%$	
C113	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C114	1	1	1	DD1001001	Ceramic, 1.0PF $\pm 0.25\%$	
C115	1	1	1	DD1615001	Ceramic, 15PF $\pm 10\%$	
C116	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C117	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C118	1	1	1	DD1620003	Ceramic, 20PF $\pm 10\%$	
C119	1	1	1	DD1210006	Ceramic, 10PF $\pm 1\%$	
C120	1	1	1	DD1615003	Ceramic, 15PF $\pm 10\%$	
C121	1	1	1	DD1615003	Ceramic, 15PF $\pm 10\%$	
C122	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C123	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C124	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C128	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
C127	1	1	1	DK1710301	Ceramic, 0.01 μF $\pm 20\%$	
L101	1	1	1	LA1202603	P100-COILS & TRANSF.	
L102	1	1	1	LA1202604	Antenna Coil	
L103	1	1	1	LA1202605	RF Coil	
L104	1	1	1	LO1202608	RF Coil	
L105	1	1	1	LI1001601	OSC Coil	
					IFT	
H101	1	1	1	HF200191A	P100-MISCELLANEOUS	
H102	1	1	1	HF200191A	FET, 2SK19(Y)	
H103	1	1	1	HT305351B	FET, 2SK19(Y)	
					Transistor, 2SC535(B)	
J101	1	1	1	YP1000094	Plug	
J102	1	1	1	YP1000094	Plug	
J103	1	1	1	57271240W	Lug Eyelet	
J104	1	1	1	57271240W	Lug Eyelet	
J105	1	1	1	57271240W	Lug Eyelet	
J106	1	1	1	57271240W	Lug Eyelet	
J107	1	1	1	57271240W	Lug Eyelet	
J108	1	1	1	57271240W	Lug Eyelet	
J109	1	1	1	57271240W	Lug Eyelet	
P150	1	1	1	YD2909001	AM TUNER CIRCUIT BOARD-P150	
	1	1	1	ZZ2927101	P.W. Board, AM Tuner(Print Only)	
					P.W. Board Assembly	
R151	1	1	1	RT0510314	P150-RESISTORS	
R152	1	1	1	RT0530314	All resistors are $\pm 5\%$ and $\frac{1}{4}W$, unless otherwise indicated.	
R153	1	1	1	RT0582314	10K Ω	
R154	1	1	1	RT0522314	30K Ω	
R155	1	1	1	RT0510414	82K Ω	
R156	1	1	1	RT0510414	22K Ω	
R157	1	1	1	RC0000012	100K Ω	
R158	1	1	1	RT0539314	0.2W	
R159	1	1	1	RT0539214	3.9K Ω	
R160	1	1	1	RC0000012	0.2W	

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
R161	1	1	1	RT0543214	4.3KΩ
R162	1	1	1	RT0510114	100Ω
R163	1	1	1	RT0515214	1.5KΩ
R164	1	1	1	RT0533114	330Ω
R165	1	1	1	RC0000012	0Ω, $\frac{1}{2}W$
R166	1	1	1	RC0000012	0Ω, $\frac{1}{2}W$
R167	1	1	1	RT0522214	2.2KΩ
R168	1	1	1	RT0582314	82KΩ
R169	1	1	1	RT0562414	620KΩ
R170	1	1	1	RT0551114	510Ω
R171	1	1	1	RT0522214	2.2KΩ
R172	1	1	1	RT0556214	5.6KΩ
R173	1	1	1	RT0510214	1KΩ
R174	1	1	1	RT0510114	100Ω
R175	1	1	1	RT0510414	100KΩ
R176	1	1	1	RT0510314	10KΩ
R177	1	1	1	RT0582214	8.2KΩ
R178	1	1	1	RA0103025	Trimming, 10KΩ (B)
R179	1	1	1	RT0510314	10KΩ
R180	1	1	1	RT0515214	1.5KΩ
R181	1	1	1	RT0510114	100Ω
R182	1	1	1	RT0515214	1.5KΩ
P150-CAPACITORS					
C151	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C152	1	1	1	DF1747305	Film, $0.047\mu F \pm 20\%$
C154	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C155	1	1	1	DF6545101	Film, $450PF \pm 5\%$
C156	1	1	1	DD1615001	Ceramic, $15PF \pm 10\%$
C157	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C158	1	1	1	DK1840302	Ceramic, $0.04\mu F + 80\%, -20\%$
C159	1	1	1	DK1840302	Ceramic, $0.04\mu F + 80\%, -20\%$
C160	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C161	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C162	1	1	1	DK1710301	Ceramic, $0.01\mu F \pm 20\%$
C163	1	1	1	DF1615305	Film, $0.015\mu F \pm 10\%$
C164	1	1	1	DF1627305	Film, $0.027\mu F \pm 10\%$
C165	1	1	1	DF1756205	Film, $5600PF \pm 20\%$
C166	1	1	1	DK1840302	Film, $0.04\mu F + 80\%, -20\%$
C167	1	1	1	EA2260169	Electrolytic, $22\mu F, 16V$
C168	1	1	1	EA1070169	Electrolytic, $100\mu F, 16V$
C169	1	1	1	EA4750359	Electrolytic, $4.7\mu F, 35V$
C170	1	1	1	EA1070169	Electrolytic, $100\mu F, 16V$
C171	1	1	1	EA1050509	Electrolytic, $1\mu F, 50V$
C172	1	1	1	EA1070169	Electrolytic, $100\mu F, 16V$
C173	1	1	1	EA4750359	Electrolytic, $4.7\mu F, 35V$
P150-MISCELLANEOUS					
H151	1	1	1	HC1000506	I.C., $\mu PC30C$
H152	1	1	1	HT313272A	Transistor, 2SC1327 S,T
H153	1	1	1	HT104942A	Transistor, 2SA494 Y,G
H154	1	1	1	HT104942A	Transistor, 2SA494 Y,G
H155	1	1	1	HH0000212	Thermistor, 31D27
L151	1	1	1	LA1001019	RF Coil, AM
L152	1	1	1	LO1001050	OSC Coil, AM
L153	1	1	1	LI1028003	IFT, AM Ceramic Filter
L154	1	1	1	LC1332002	Choke Coil, $3.3\mu H$
L155	1	1	1	LC1332002	Choke Coil, $3.3\mu H$
J151	1	1	1	YP1000113	Plug
J152	1	1	1	YP1000113	Plug
J153	1	1	1	YP1000113	Plug

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
J155	1	1	1	YP1000113	Plug
J156	1	1	1	YP1000113	Plug
J157	1	1	1	YP1000113	Plug
J158	1	1	1	YP1000113	Plug
J159	1	1	1	YP1000113	Plug
J160	1	1	1	YP1000113	Plug
J161	1	1	1	YP1000113	Plug
FM IF & DETECTOR CIRCUIT BOARD-P200					
P200	1	1	1	YD2927001	P.W. Board, FM IF & Detector (Print Only)
				ZZ2927001	P.W. Board Assembly
P200—RESISTORS					
	All resistors are $\pm 5\%$ and $\frac{1}{2}W$.				
R201	1	1	1	RT0533014	33Ω
R202	1	1	1	RT0510114	100Ω
R203	1	1	1	RT0512314	12KΩ
R204	1	1	1	RT0547214	4.7KΩ
R205	1	1	1	RT0510214	1KΩ
R206	1	1	1	RT0522214	2.2KΩ
R208	1	1	1	RT0533314	33KΩ
R210	1	1	1	RT0533014	33Ω
R211	1	1	1	RT0515214	1.5KΩ
R212	1	1	1	RT0533214	3.3KΩ
R213	1	1	1	RT0547114	470Ω
R214	1	1	1	RT0510214	1KΩ
R215	1	1	1	RT0510114	100Ω
R216	1	1	1	RT0515214	1.5KΩ
R217	1	1	1	RT0533214	3.3KΩ
R218	1	1	1	RT0515114	150Ω
R219	1	1	1	RT0510214	1KΩ
R220	1	1	1	RT0510214	1KΩ
R222	1	1	1	RT0510414	100KΩ
R223	1	1	1	RT0575014	75Ω
R224	1	1	1	RT0527114	270Ω
R225	1	1	1	RT0515114	150Ω
R226	1	1	1	RT0515214	1.5KΩ
R227	1	1	1	RT0533214	3.3KΩ
R228	1	1	1	RT0515114	150Ω
R229	1	1	1	RT0510214	1KΩ
R230	1	1	1	RT0510214	1KΩ
R231	1	1	1	RT0515114	150Ω
R232	1	1	1	RT0510414	100KΩ
R235	1	1	1	RT0510114	100Ω
R236	1	1	1	RT0513114	130Ω
R237	1	1	1	RT0582214	8.2KΩ
R238	1	1	1	RT0515314	15KΩ
R239	1	1	1	RT0515114	150Ω
R240	1	1	1	RT0510214	1KΩ
R241	1	1	1	RT0510214	1KΩ
R242	1	1	1	RT0568314	68KΩ
R243	1	1	1	RT0510114	100Ω
R244	1	1	1	RT0510414	100KΩ
R245	1	1	1	RT0527114	270Ω
R246	1	1	1	RT0582214	8.2KΩ
R247	1	1	1	RT0515314	15KΩ
R248	1	1	1	RT0515114	150Ω
R249	1	1	1	RT0510214	1KΩ
R250	1	1	1	RT0510214	1KΩ
R252	1	1	1	RT0510414	100KΩ
R253	1	1	1	RT0515114	150Ω
R254	1	1	1	RT0515314	15KΩ

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
R256	1	1	1	RT0512314	12KΩ
R257	1	1	1	RT0582214	8.2KΩ
R258	1	1	1	RT0515314	15KΩ
R259	1	1	1	RT0515114	150Ω
R260	1	1	1	RT0510214	1KΩ
R261	1	1	1	RT0522314	22KΩ
R263	1	1	1	RT0522114	220Ω
R264	1	1	1	RT0582114	820Ω
R265	1	1	1	RT0582114	820Ω
R266	1	1	1	RT0510314	10KΩ
R267	1	1	1	RT0510314	10KΩ
R268	1	1	1	RT0510114	100Ω
R269	1	1	1	RT0527314	27KΩ
R270	1	1	1	RT0510114	100Ω
R271	1	1	1	RT0510114	100Ω
R272	1	1	1	RT0556214	5.6KΩ
R273	1	1	1	RT0510414	100KΩ
R274	1	1	1	RT0518414	180KΩ
R275	1	1	1	RT0510414	100KΩ
R276	1	1	1	RT0522214	2.2KΩ
R277	1	1	1	RT0510114	100Ω
P200-CAPACITORS					
C201	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C202	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C203	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C204	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C206	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C208	1	1	1	DK1810402	Ceramic, 0.1μF+80%,-20%
C209	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C210	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C211	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C212	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C213	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C216	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C217	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C218	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C221	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C222	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C223	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C224	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C225	1	1	1	DD1620101	Ceramic, 200PF±10%
C226	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C227	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C228	1	1	1	DK1840301	Ceramic, 0.04μF+80%,-20%
C229	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C230	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C231	1	1	1	DK1710201	Ceramic, 0.001μF±20%
C232	1	1	1	DK1810402	Ceramic, 0.1μF+80%,-20%
C233	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C234	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C235	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C236	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C237	1	1	1	EA1060169	Electrolytic, 10μF, 16V
C238	1	1	1	DD1620101	Ceramic, 200PF±20%
C239	1	1	1	DD1620101	Ceramic, 200PF±20%
C240	1	1	1	EA1070109	Electrolytic, 100μF, 10V
C241	1	1	1	DD1620101	Ceramic, 200PF±20%
C242	1	1	1	EA1070169	Electrolytic, 100μF, 16V
C243	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
C244	1	1	1	EA1060169	Electrolytic, 10μF, 16V
C245	1	1	1	EA2260169	Electrolytic, 22μF, 16V

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
C246	1	1	1	EA2260169	Electrolytic, 22μF, 16V
C247	1	1	1	DK1710301	Ceramic, 0.01μF±20%
C248	1	1	1	DD1540001	Ceramic, 40PF±5%
C249	1	1	1	DK1840302	Ceramic, 0.04μF+80%,-20%
P200-FILTERS & SEMICONDUCTORS					
F201	1	1	1	FF1107005	Ceramic Filter, SFE107MD-1
F202	1	1	1	FF1107005	Ceramic Filter, SFE107MD-1
F203	1	1	1	FF1107005	Ceramic Filter, SFE107MD-1
H201	1	1	1	HT308291C	Transistor, 2SC829C
H202	1	1	1	HT308291C	Transistor, 2SC829C
H203	1	1	1	HT308291C	Transistor, 2SC829C
H204	1	1	1	HT308291C	Transistor, 2SC829C
H205	1	1	1	HT308291C	Transistor, 2SC829C
H206	1	1	1	HT308291C	Transistor, 2SC829C
H207	1	1	1	HT308291C	Transistor, 2SC829C
H208	1	1	1	HT306441B	Transistor, 2SC644S
H210	1	1	1	HD1000105	Diode, 1N60
H211	1	1	1	HD1000105	Diode, 1N60
H216	1	1	1	HD2001105	Diode, 1S1555
H217	1	1	1	HD2001105	Diode, 1S1555
H220	1	1	1	HD2001105	Diode, 1S1555
H221	1	1	1	HD2001105	Diode, 1S1555
H222	1	1	1	HD1000105	Diode, 1N60
H223	1	1	1	HD1000105	Diode, 1N60
H224	1	1	1	HD2001105	Diode, 1S1555
H225	1	1	1	HD2001105	Diode, 1S1555
H226	1	1	1	HD1000105	Diode, 1N60
H227	1	1	1	HD1000105	Diode, 1N60
H228	1	1	1	HD2001105	Diode, 1S1555
H229	1	1	1	HD2001105	Diode, 1S1555
H230	1	1	1	HD1000302	Diode, 20A90M
H231	1	1	1	HD1000302	Diode, 20A90M
H232	1	1	1	HD1000302	Diode, 20A90M
P200-MISCELLANEOUS					
L201	1	1	1	LI1401623	IFT, FM
L202	1	1	1	LC1332002	Choke Coil, 3.3μH
J201	1	1	1	YP1000113	Plug
J202	1	1	1	YP1000113	Plug
J203	1	1	1	YP1000113	Plug
J204	1	1	1	YP1000113	Plug
J205	1	1	1	YP1000113	Plug
J206	1	1	1	YP1000113	Plug
J207	1	1	1	YP1000113	Plug
J208	1	1	1	YP1000113	Plug
J209	1	1	1	YP1000113	Plug
J211	1	1	1	YP1000113	Plug
FM MPX & MUTING CIRCUIT BOARD-P300					
P300	1	1	1	YD2927002	P.W. Board, FM MPX & Muting (Print Only)
	1	1	1	ZZ2927002	P.W. Board Assembly
P300-RESISTORS					
All resistors are ±5% and 1/4W, unless otherwise indicated.					
R301	1	1	1	RA0202011	Trimming, 2KΩ (B)
R302	1	1	1	RT0522414	220KΩ
R303	1	1	1	RT0556314	56KΩ

U: For U.S.A.
 C: For Canada
 E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION	REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION						
R304	1	1	1	RT0568314	68KΩ	R367	1	1	1	RT0510114	100Ω						
R305	1	1	1	RT0510114	100Ω	R368	1	1	1	RT0527414	270KΩ						
R306	1	1	1	RT0518414	180KΩ	R369	1	1	1	RT0510314	10KΩ						
R307	1	1	1	RT0522414	220KΩ	R370	1	1	1	RT0512314	12KΩ						
R308	1	1	1	RT0512414	120KΩ	R371	1	1	1	RT0522114	220Ω						
R309	1	1	1	RT0510414	100KΩ	R375	1	1	1	RT0510114	100Ω						
R310	1	1	1	RT0568214	6.8KΩ	R376	1	1	1	RT0510414	100KΩ						
R311	1	1	1	RA0502020	Trimming, 5KΩ (B)	R377	1	1	1	RT0510414	100KΩ						
R312	1	1	1	RT0516314	16KΩ	R378	1	1	1	RT0556214	5.6KΩ						
R313	1	1	1	RT0510214	1KΩ	R379	1	1	1	RT0522214	2.2KΩ						
R314	1	1	1	RT0520314	20KΩ	R380	1	1	1	RT0527214	2.7KΩ						
R315	1	1	1	RT0510214	1KΩ	P300-CAPACITORS											
R316	1	1	1	RT0510214	1KΩ	C301	1	1	1	DF1639205	Film, 3900PF ±10%						
R317	1	1	1	RT0539214	3.9KΩ	C302	1	1	1	EA3360109	Electrolytic, 33μF, 10V						
R318	1	1	1	RT0539214	3.9KΩ	C303	1	1	1	DF1722305	Film, 0.0022μF ±20%						
R319	1	1	1	RT0524314	24KΩ	C304	1	1	1	EA2260169	Electrolytic, 22μF, 16V						
R320	1	1	1	RT0522314	22KΩ	C305	1	1	1	DF5547101	Film, 470PF ±5%						
R321	1	1	1	RT0510114	100Ω	C306	1	1	1	EA2260169	Electrolytic, 22μF, 16V						
R322	1	1	1	RC00000012	0Ω, 1/2W	C307	1	1	1	EQ4740501	Electrolytic, 0.47μF, ±20%, 50V						
R323	1	1	1	RT0522414	220KΩ	C308	1	1	1	EQ2240501	Electrolytic, 0.22μF, ±20%, 50V						
R324	1	1	1	RT0522414	220KΩ	C309	1	1	1	EQ2240501	Electrolytic, 0.22μF, ±20%, 50V						
R325	1	1	1	RT0530314	30KΩ	C310	1	1	1	DF1747301	Film, 0.047μF ±20%, 50V						
R326	1	1	1	RT0530314	30KΩ	C311	1	1	1	DF1515205	Film, 1500PF ±5%						
R327	1	1	1	RT0510414	100KΩ	C312	1	1	1	DF1515205	Film, 1500PF ±5%						
R328	1	1	1	RT0510414	100KΩ	C313	1	1	1	DD1536101	Ceramic, 360PF ±5%						
R329	1	1	1	RT0515514	1.5MΩ	C314	1	1	1	DD1536101	Ceramic, 360PF ±5%						
R330	1	1	1	RT0515514	1.5MΩ	C315	1	1	1	DF1533205	Film, 3300PF ±5%						
R331	1	1	1	RT0551114	510Ω	C316	1	1	1	DF1533205	Film, 3300PF ±5%						
R332	1	1	1	RT0551114	510Ω	C317	1	1	1	DF1515205	Film, 1500PF ±5%						
R333	1	1	1	RT0522314	22KΩ	C318	1	1	1	DF1515205	Film, 1500PF ±5%						
R334	1	1	1	RT0522314	22KΩ	C319	1	1	1	DF1522205	Film, 2200PF ±5%						
R335	1	1	1	RT0510114	100Ω	C320	1	1	1	DF1522205	Film, 2200PF ±5%						
R336	1	1	1	RT0510114	100Ω	C321	1	1	1	DF1510205	Film, 1000PF ±5%						
R337	1	1	1	RT0582214	8.2KΩ	C322	1	1	1	DF1510205	Film, 1000PF ±5%						
R338	1	1	1	RT0582214	8.2KΩ	C323	1	1	1	EV2240351	Electrolytic, 0.22μF ±20%, 35V						
R339	1	1	1	RT0547114	470Ω	C324	1	1	1	EV2240351	Electrolytic, 0.22μF ±20%, 35V						
R340	1	1	1	RT0547114	470Ω	C325	1	1	1	EV1050352	Electrolytic, 1μF ±20%, 35V						
R341	1	1	1	RT0522414	220KΩ	C326	1	1	1	EV1050352	Electrolytic, 1μF ±20%, 35V						
R342	1	1	1	RT0522414	220KΩ	C327	1	1	1	EA2270259	Electrolytic, 220μF, 25V						
R343	1	1	1	RT0539214	3.9KΩ	C328	1	1	1	EA2270169	Electrolytic, 220μF, 16V						
R344	1	1	1	RT0556414	560KΩ	C329	1	1	1	EA1060169	Electrolytic, 10μF, 16V						
R345	1	1	1	RT0515314	15KΩ	C330	1	1	1	DK1840302	Ceramic, 0.04μF +80%,-20%						
R346	1	1	1	RT0512414	120KΩ	C331	1	1	1	EA1050509	Electrolytic, 1μF, 50V						
R347	1	1	1	RT0510114	100Ω	C332	1	1	1	EA1060169	Electrolytic, 10μF, 16V						
R348	1	1	1	RT0522414	220KΩ	C333	1	1	1	DD1210001	Ceramic, 10PF ±10%						
R349	1	1	1	RT0556214	5.6KΩ	C334	1	1	1	DF1668301	Film, 0.068μF ±10%						
R350	1	1	1	RT0510314	10KΩ	C335	1	1	1	DF1740301	Film, 0.04μF ±20%						
R351	1	1	1	RT0510114	100Ω	C336	1	1	1	DK1810402	Ceramic, 0.1μF+80%,-20%						
R352	1	1	1	RT0533314	33KΩ	C337	1	1	1	EA4750359	Electrolytic, 4.7μF, 35V						
R353	1	1	1	RT0510114	100Ω	C338	1	1	1	EA1050509	Electrolytic, 1μF, 50V						
R354	1	1	1	RT0510414	100KΩ	C343	1	1	1	DF1710402	Film, 0.1μF ±20%						
R355	1	1	1	RT0527314	27KΩ	C344	1	1	1	DK1820302	Ceramic, 0.02μF+80%,-20%						
R356	1	1	1	RT0510414	100KΩ	P300-SEMICONDUCTORS											
R357	1	1	1	RT0510214	1KΩ	H301	1	1	1	HF200301C	FET, 2SK30(Y)						
R358	1	1	1	RT0510114	100Ω	H302	1	1	1	HT308281D	Transistor, 2SC828S						
R359	1	1	1	RT0527314	27KΩ	H303	1	1	1	HT308281D	Transistor, 2SC828S						
R360	1	1	1	RT0533314	33KΩ	H304	1	1	1	HT307322A	Transistor, 2SC732 B or G						
R361	1	1	1	RT0510414	100KΩ	H305	1	1	1	HT307322A	Transistor, 2SC732 B or G						
R362	1	1	1	RA0104018	Trimming, 100KΩ(B)	H306	1	1	1	HT104942A	Transistor, 2SA494 G or Y						
R363	1	1	1	RA0103025	Trimming, 10KΩ(B)	H307	1	1	1	HT104942A	Transistor, 2SA494 G or Y						
R364	1	1	1	RT0522214	2.2KΩ	H308	1	1	1	HT308281D	Transistor, 2SC828 S						
R365	1	1	1	RT0510114	100Ω	H309	1	1	1	HT308281D	Transistor, 2SC828 S						
R366	1	1	1	RT0510314	10KΩ												

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION	
H310	1	1	1	HT308281D	Transistor,	2SC828 S
H311	1	1	1	HT308281D	Transistor,	2SC828 S
H312	1	1	1	HF200300A	FET,	2SK30 Y
H313	1	1	1	HT308281D	Transistor,	2SC828 S
H314	1	1	1	HT308281D	Transistor,	2SC828 S
H315	1	1	1	HT308281D	Transistor,	2SC828 S
H317	1	1	1	HT308281D	Transistor,	2SC828S
H318	1	1	1	HD1000105	Diode,	1N60
H319	1	1	1	HD1000105	Diode,	1N60
H321	1	1	1	HC1000401	I.C.,	HA1156
P300-MISCELLANEOUS						
L301	1	1	1	LS1029004	MPX Coil,	56mH
L302	1	1	1	LS1029004	MPX Coil,	56mH
L303	1	1	1	LS1029005	MPX Coil,	43mH
L304	1	1	1	LS1029005	MPX Coil,	43mH
L305	1	1	1	LC2105001	Choke Coil,	1mH
J301	1	1	1	YP1000113	Plug	
J314						
J317	1	1	1	YP1000113	Plug	
J322						
DOLBY LEVEL CIRCUIT BOARD-PC01						
PC01	1	1	1	YD2916003	P.W. Board, Dolby Level (Print Only)	
	1	1	1	ZZ2916003	P. W. Board Assembly	
PC01-RESISTORS						
RC01	1	1	1	RA0104015	Trimming,	100KΩ (B)
RC02	1	1	1	RA0104015	Trimming,	100KΩ (B)
RC03	1	1	1	RT0568314	68KΩ	±5%, 1/4W
RC04	1	1	1	RT0568314	68KΩ	±5%, 1/4W
RC05	1	1	1	RT0510414	100KΩ	±5%, 1/4W
RC06	1	1	1	RT0510414	100KΩ	±5%, 1/4W
RC07	1	1	1	RT0539214	3.9KΩ	±5%, 1/4W
RC08	1	1	1	RT0539214	3.9KΩ	±5%, 1/4W
RC09	1	1	1	RT0510414	100KΩ	±5%, 1/4W
RC10	1	1	1	RT0510414	100KΩ	±5%, 1/4W
PC01-CAPACITORS						
CC01	1	1	1	EV1050256	Electrolytic,	1μF, 25V
CC02	1	1	1	EV1050256	Electrolytic,	1μF, 25V
CC03	1	1	1	EV1050256	Electrolytic,	1μF, 25V
CC04	1	1	1	EV1050256	Electrolytic,	1μF, 25V
PC01-MISCELLANEOUS						
JC01	1	1	1	YP1000113	Plug	
JC02	1	1	1	YP1000113	Plug	
JC03	1	1	1	YP1000113	Plug	
JC04	1	1	1	YP1000113	Plug	
JC05	1	1	1	YP1000113	Plug	
JC06	1	1	1	YP1000113	Plug	
JC07	1	1	1	YP1000113	Plug	
JC08	1	1	1	YP1000113	Plug	
HC01	1	1	1	HT313272A	Transistor,	2SC1327 S.T
HC02	1	1	1	HT313272A	Transistor,	2SC1327 S.T
ANTENNA MUTING CIRCUIT BOARD-PU01						
PU01	1	1	1	YD2916007	P.W. Board, Antenna Muting (Print Only)	
	1	1	1	ZZ2916007	P.W. Board Assembly	

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION	
RU04	1	1	1	RK0203032	PU01-MISCELLANEOUS	
RU05	1	1	1	RK0503010	Variable Resistor, 20KΩ (B)	
RU06	1	1	1	RT0543214	Variable Resistor, 50KΩ (B)	
					Resistor, 4.3KΩ±5%, 1/4W	
LU01	1	1	1	LB3007526	FUNCTION LAMP CIRCUIT BOARD-PY01	
LU02	1	1	1	LC1154002	Balun Coil	
					Choke Coil	
JU01	1	1	1	YT0304009	Terminal, Antenna	
JU02	1	1	1	YP1000113	Plug	
JU07						
PY01	1	1	1	YD2916006	PY01-MISCELLANEOUS	
	1	1	1	ZZ2927106	P.W. Board, Function Lamp(Print Only)	
					P.W. Board Assembly	
MY02	1	1	1	IN1008037	PY01-MISCELLANEOUS	
MY03	1	1	1	IN1008037	Lamp, AM, 8V 40mA	
MY04	1	1	1	IN1008037	Lamp, FM, 8V 40mA	
MY05	1	1	1	IN1008037	Lamp, PHONO,8V 40mA	
MY06	1	1	1	IN1008037	Lamp, TAPE 1, 8V 40mA	
					Lamp, AUX, 8V 40mA	
JY02	1	1	1	YP1000113	Plug	
JY11						
PZ01	1	1	1	YD2886016	DIAL LAMP CIRCUIT BOARD-PZ01	
	1	1	1	ZZ2927116	P.W. Board, Dial Lamp(Print Only)	
					P.W. Board Assembly	
MZ01	1	1	1	IN1008007	PZ01-MISCELLANEOUS	
MZ05					Lamp	
JZ01	1	1	1	YJ0800017	Socket	
JZ10						
JZ11	1	1	1	YP1000113	Plug	
JZ14						
PH01	1	1	1	YD2915008	FILTER & DOLBY CIRCUIT BOARD-PH01	
	1	1	1	ZZ2915008	P.W. Board, Filter & Dolby(Print Only)	
				1	P.W. Board Assembly	
				1	P.W. Board Assembly	
RH01	1	1	1	RT0510214	PH01-RESISTORS	
RH02	1	1	1	RT0510214	1KΩ ±5%, 1/4W	
RH04	1	1	1	RT0510514	1KΩ ±5%, 1/4W	
RH05	1	1	1	RT0510514	1MΩ ±5%, 1/4W	
RH06	1	1	1	RT0547214	4.7KΩ ±5%, 1/4W	
RH07	1	1	1	RT0547214	4.7KΩ ±5%, 1/4W	
RH08	1	1	1	RT0522514	2.2MΩ ±5%, 1/4W	
RH09	1	1	1	RT0522514	2.2MΩ ±5%, 1/4W	
CH01	1	1		DF1522205	PH01-CAPACITORS, SWITCH & PLUGS	
					Film, 0.0022μF±10%,50V	

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION	REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
CH02	1	1		DF1522205	Film, 0.0022 μ F ±10%, 50V	R413	1	1	1	RT0533314	33K Ω
CH03	1	1	1	DF1668205	Film, 0.0068 μ F ±10%, 50V	R414	1	1	1	RT0533314	33K Ω
CH04	1	1	1	DF1668205	Film, 0.0068 μ F ±10%, 50V	R415	1	1	1	RT0556214	5.6K Ω
CH01		1		DF1510205	Film, 0.001 μ F ±5%, 50V	R416	1	1	1	RT0556214	5.6K Ω
CH02		1		DF1510205	Film, 0.001 μ F ±5%, 50V	R417	1	1	1	RT0518214	1.8K Ω
CH05	1	1	1	EV2240351	Electrolytic, 0.22 μ F ±20%, 35V	R418	1	1	1	RT0518214	1.8K Ω
CH06	1	1	1	EV2240351	Electrolytic, 0.22 μ F ±20%, 35V	R419	1	1	1	RT0547214	4.7K Ω
						R420	1	1	1	RT0547214	4.7K Ω
SH01	1	1	1	SP0404014	Pushswitch	R421	1	1	1	RT0522414	220K Ω
JH01		1	1	YP1000120	Plug	R422	1	1	1	RT0522414	220K Ω
JH28						R423	1	1	1	RT0556314	56K Ω
						R424	1	1	1	RT0556314	56K Ω
						R425	1	1	1	RT0533214	3.3K Ω
						R426	1	1	1	RT0533214	3.3K Ω
						R427	1	1	1	RN0582414	820K Ω
						R428	1	1	1	RN0582414	820K Ω
						R429	1	1	1	RT0510114	100 Ω
											P400-CAPACITORS
PT01	1	1	1	YD2915006	P.W. Board, Main & Remote Switch	C401	1	1	1	EV2250256	Electrolytic, 2.2 μ F ±20%, 25V
	1	1	1	ZZ2915006	P.W. Board Assembly	C402	1	1	1	EV2250256	Electrolytic, 2.2 μ F ±20%, 25V
						C403	1	1	1	DD1520101	Ceramic, 200PF ±10%, 50V
						C404	1	1	1	DD1520101	Ceramic, 200PF ±10%, 50V
						C405	1	1	1	DD1610101	Ceramic, 100PF ±10%, 50V
						C406	1	1	1	DD1610101	Ceramic, 100PF ±10%, 50V
						C407	1	1	1	EE2260251	Electrolytic, 22 μ F ±20%, 25V
						C408	1	1	1	EE2260251	Electrolytic, 22 μ F ±20%, 25V
						C409	1	1	1	DD1615001	Ceramic, 15PF ±10%, 50V
						C410	1	1	1	DD1615001	Ceramic, 15PF ±10%, 50V
						C411	1	1	1	EA4760169	Electrolytic, 47 μ F +100%,-10%, 16V
						C412	1	1	1	EA4760169	Electrolytic, 47 μ F +100%,-10%, 16V
						C413	1	1	1	DD1610101	Ceramic, 100PF ±10%, 50V
						C414	1	1	1	DD1610101	Ceramic, 100PF ±10%, 50V
						C415	1	1	1	DF1747401	Film, 0.47 μ F ±20%, 50V
						C416	1	1	1	DF1747401	Film, 0.47 μ F ±20%, 50V
						C417	1	1	1	DF5412201	Film, 1200PF ±2%, 50V
						C418	1	1	1	DF5412201	Film, 1200PF ±2%, 50V
						C419	1	1	1	DF5547201	Film, 4700PF ±5%, 50V
						C420	1	1	1	DF5547201	Film, 4700PF ±5%, 50V
						C421	1	1	1	EA1070509	Electrolytic, 100 μ F+100%,-10%, 50V
						C423	1	1	1	DD1650001	Ceramic, 50PF ±10%, 50V
						C424	1	1	1	DD1650001	Ceramic, 50PF ±10%, 50V
											P400-MISCELLANEOUS
CT01	1	1	1	DD1612101	Ceramic, 120PF ±10%, 50V	H401	1	1	1	HT313281T	Transistor, 2SC1328T
CT02	1	1	1	DD1612101	Ceramic, 120PF ±10%, 50V	H402	1	1	1	HT313281T	Transistor, 2SC1328T
CT03	1	1	1	DF1627305	Film, 0.027 μ F ±10%, 50V	H403	1	1	1	HT313282A	Transistor, 2SC1328S,T
CT04	1	1	1	DF1627305	Film, 0.027 μ F ±10%, 50V	H404	1	1	1	HT313282A	Transistor, 2SC1328S,T
						H405	1	1	1	HT313281T	Transistor, 2SC1328T
						H406	1	1	1	HT313281T	Transistor, 2SC1328T
						J401	1	1	1	YP1000113	Plug
						J407					
											EQUALIZER AMP. CIRCUIT BOARD P400
P400	1	1	1	YD2915003	P.W. Board, Equalizer Amp.(Print Only)						
	1	1	1	ZZ2915003	P.W. Board Assembly						
											P400-RESISTORS
					All resistors are ±5% and 1/4W.						
R401	1	1	1	RT0582314	82K Ω						
R402	1	1	1	RT0582314	82K Ω						
R403	1	1	1	RT0547114	470 Ω						
R404	1	1	1	RT0547114	470 Ω						
R405	1	1	1	RN0539414	390K Ω						
R406	1	1	1	RN0539414	390K Ω						
R407	1	1	1	RT0522314	22K Ω						
R408	1	1	1	RT0522314	22K Ω						
R409	1	1	1	RT0582114	820 Ω						
R410	1	1	1	RT0582114	820 Ω						
R411	1	1	1	RN0510414	100K Ω						
R412	1	1	1	RN0510414	100K Ω						
											PRE & TONE AMP.CIRCUIT BOARD PE01
						PE01	1	1	1	YD2915004	P.W. Board, Pre & Tone Amp. (Print Only)
							1	1	1	ZZ2915004	P.W. Board Assembly

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REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
PE01—RESISTORS All resistors are $\pm 5\%$ and $\frac{1}{4}W$, unless otherwise indicated.					
RE01	1	1	1	RT0547414	470K Ω
RE02	1	1	1	RT0547414	470K Ω
RE03	1	1	1	RT0539114	390 Ω
RE04	1	1	1	RT0539114	390 Ω
RE05	1	1	1	RN0510514	1M Ω
RE06	1	1	1	RN0510514	1M Ω
RE07	1	1	1	RN0510414	100K Ω
RE08	1	1	1	RT0510314	10K Ω
RE09	1	1	1	RT0527314	27K Ω
RE10	1	1	1	RT0527314	27K Ω
RE11	1	1	1	RT0510214	1K Ω
RE12	1	1	1	RT0510214	1K Ω
RE13	1	1	1	RT0551214	5.1K Ω
RE14	1	1	1	RT0551214	5.1K Ω
RE15	1	1	1	RT0510214	1K Ω
RE16	1	1	1	RT0510214	1K Ω
RE17	1	1	1	RT0547414	470K Ω
RE18	1	1	1	RT0547414	470K Ω
RE19	1	1	1	RT0556214	5.6K Ω
RE20	1	1	1	RT0556214	5.6K Ω
RE21	1	1	1	RT0512314	12K Ω
RE22	1	1	1	RT0512314	12K Ω
RE23	1	1	1	RT0515414	150K Ω
RE24	1	1	1	RT0515414	150K Ω
RE25	1	1	1	RT0556214	5.6K Ω
RE26	1	1	1	RT0556214	5.6K Ω
RE27	1	1	1	RT0556214	5.6K Ω
RE28	1	1	1	RT0556214	5.6K Ω
RE29	1	1	1	RT0527314	27K Ω
RE30	1	1	1	RT0527314	27K Ω
RE31	1	1	1	RT0512314	12K Ω
RE32	1	1	1	RT0512314	12K Ω
RE33	1	1	1	RT0515314	15K Ω
RE34	1	1	1	RT0515314	15K Ω
RE35	1	1	1	RT0547414	470K Ω
RE36	1	1	1	RT0547414	470K Ω
RE37	1	1	1	RT0527314	27K Ω
RE38	1	1	1	RT0527314	27K Ω
RE39	1	1	1	RT0522514	2.2M Ω
RE40	1	1	1	RT0522514	2.2M Ω
RE41	1	1	1	RT0568314	68K Ω
RE42	1	1	1	RT0568314	68K Ω
RE43	1	1	1	RT0547314	47K Ω
RE44	1	1	1	RT0547314	47K Ω
RE45	1	1	1	RT0510314	10K Ω
RE46	1	1	1	RT0510314	10K Ω
RE47	1	1	1	RT0522114	220 Ω
RE48	1	1	1	RT0522114	220 Ω
RE49	1	1	1	RT0547414	470K Ω
RE50	1	1	1	RT0547414	470K Ω
RE51	1	1	1	RM0104005	Variable, 100K Ω (B)High
RE52	1	1	1	RM0104005	Variable, 100K Ω (B)Mid
RE53	1	1	1	RM0104005	Variable, 100K Ω (B)Low
RE54	1	1	1	RT0582114	820 Ω
RE55	1	1	1	RC0000012	0 Ω , $\frac{1}{2}W$
PE01—CAPACITORS					
CE01	1	1	1	DF1722405	Film, 0.22 μ F $\pm 20\%$, 50V
CE02	1	1	1	DF1722405	Film, 0.22 μ F $\pm 20\%$, 50V

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
PE01—SEMICONDUCTORS & PLUGS					
HE01	1	1	1	HT313283A	Transistor, 2SC1328 S,T,U
HE02	1	1	1	HT313283A	Transistor, 2SC1328 S,T,U
HE03	1	1	1	HT107632A	Transistor, 2SA763 4.5
HE04	1	1	1	HT107632A	Transistor, 2SA763 4.5
HE05	1	1	1	HT313283A	Transistor, 2SC1328 S,T,U
HE06	1	1	1	HT313283A	Transistor, 2SC1328 S,T,U
HE07	1	1	1	HT107632A	Transistor, 2SA763 4.5
HE08	1	1	1	HT107632A	Transistor, 2SA763 4.5
JE01	?	1	1	YP1000113	Plug
MAIN AMP.CIRCUIT BOARD-P700					
P700	1	1	1	YD2890004	P.W. Board, Main Amp.(Print Only)
	1	1	1	ZZ2927204	P.W. Board Assembly
P700-RESISTORS All resistors are $\pm 5\%$ and $\frac{1}{4}W$, unless otherwise indicated.					
R701	1	1	1	RT0520214	2K Ω
R702	1	1	1	RT0520214	2K Ω
R703	1	1	1	RT0533314	33K Ω
R704	1	1	1	RT0533314	33K Ω
R705	1	1	1	RT0568214	6.8K Ω
R706	1	1	1	RT0568214	6.8K Ω
R707	1	1	1	RT0510214	1K Ω
R708	1	1	1	RT0510214	1K Ω
R709	1	1	1	RT0556314	56K Ω
R710	1	1	1	RT0556314	56K Ω
R711	1	1	1	RT0547214	4.7K Ω
R712	1	1	1	RT0547214	4.7K Ω
R713	1	1	1	RA0502017	Trimming, 5K Ω (B)
R714	1	1	1	RA0502017	Trimming, 5K Ω (B)
R715	1	1	1	RT0515414	150K Ω
R716	1	1	1	RT0515414	150K Ω
R717	1	1	1	RT0520214	2K Ω

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REF. DESIG.	QTY.			PART NO.	DESCRIPTION	REF. DESIG.	QTY.			PART NO.	DESCRIPTION						
	U	C	E				U	C	E								
R718	1	1	1	RT0520214	2KΩ	C712	1	1	1	EE4760162	Electrolytic, 47μF ±20%, 16V						
R719	1	1	1	RT0533314	33KΩ	C713	1	1	1	ED2270509	Electrolytic, 220μF+50%,-10%,50V						
R720	1	1	1	RT0533314	33KΩ	C714	1	1	1	ED2270509	Electrolytic, 220μF+50%,-10%,50V						
R721	1	1	1	GF0510212	1KΩ ±5%, ½W	C719	1	1	1	DK1610150	Ceramic, 100PF						
R722	1	1	1	RT0524214	2.4KΩ	C720	1	1	1	DK1610150	Ceramic, 100PF						
R723	1	1	1	RT0524214	2.4KΩ	C721	1	1	1	DF1710452	Film, 0.1μF,200V						
R724	1	1	1	RT0547214	4.7KΩ	C722	1	1	1	DF1710452	Film, 0.1μF,200V						
R725	1	1	1	RT0547214	4.7KΩ	C725	1	1	1	DF1610205	Film, 0.001μF±10%,50V						
R728	1	1	1	RT0522114	220Ω	C726	1	1	1	DF1610205	Film, 0.001μF±10%,50V						
R729	1	1	1	RT0522114	220Ω	P700-SEMICONDUCTORS											
R730	1	1	1	GF0533014	33Ω	H701	1	1	1	HT107631B	Transistor, 2SA763 4.5						
R731	1	1	1	GF0533014	33Ω	H702	1	1	1	HT107631B	Transistor, 2SA763 4.5						
R732	1	1	1	GF0543114	430Ω	H703	1	1	1	HT107631B	Transistor, 2SA763 4.5						
R733	1	1	1	GF0543114	430Ω	H704	1	1	1	HT107631B	Transistor, 2SA763 4.5						
R734	1	1	1	GF0527114	270Ω	H705	1	1	1	HT308753B	Transistor, 2SC875 C,D,E						
R735	1	1	1	GF0527114	270Ω	H706	1	1	1	HT308753B	Transistor, 2SC875 C,D,E						
R736	1	1	1	GF0524214	2.4KΩ	H707	1	1	1	HT309451Q	Transistor, 2SC945 Q						
R737	1	1	1	GF0524214	2.4KΩ	H708	1	1	1	HT309451Q	Transistor, 2SC945 Q						
R738	1	1	1	GF0527214	2.7KΩ	H709	1	1	1	HT107331Q	Transistor, 2SA733 Q						
R739	1	1	1	GF0527214	2.7KΩ	H710	1	1	1	HT107331Q	Transistor, 2SA733 Q						
R740	1	1	1	GF0533214	3.3KΩ	H711	1	1	1	HT309591L	Transistor, 2SC959 M,L,K						
R741	1	1	1	GF0533214	3.3KΩ	H712	1	1	1	HT309591L	Transistor, 2SC959 M,L,K						
R742	1	1	1	GF0510114	100Ω	H713	1	1	1	HT106061L	Transistor, 2SA606 M,L,K						
R743	1	1	1	GF0510114	100Ω	H714	1	1	1	HT106061L	Transistor, 2SA606 M,L,K						
R744	1	1	1	GF0510114	100Ω	H715	1	1	1	HD3003009	Diode, WZ-177						
R745	1	1	1	GF0510114	100Ω	H716	1	1	1	HV0000312	Varistor, MV-13						
R746	1	1	1	GJ0510002	10Ω ±5%, 2W	H717	1	1	1	HV0000312	Varistor, MV-13						
R747	1	1	1	GJ0510002	10Ω ±5%, 2W	H718	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R748	1	1	1	GF0510014	10Ω	H719	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R749	1	1	1	GF0510014	10Ω	H720	1	1	1	HT307351C	Transistor, 2SC735 Y						
R750	1	1	1	GF0522112	220Ω ±5%, ½W	H721	1	1	1	HT307351C	Transistor, 2SC735 Y						
R751	1	1	1	GF0522112	220Ω ±5%, ½W	H722	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R752	1	1	1	GF0522112	220Ω ±5%, ½W	H723	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R753	1	1	1	GF0522112	220Ω ±5%, ½W	H724	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R754	1	1	1	GF0510014	10Ω	H725	1	1	1	HD2000221	Diode, 1S2472 (Gr)						
R755	1	1	1	GF0510014	10Ω	H727	1	1	1	HH0000812	Thermistor, 21 D 28						
R756	1	1	1	GX1022203	0.22Ω ±10%, 3W	H728	1	1	1	HH0000812	Thermistor, 21 D 28						
R757	1	1	1	GX1022203	0.22Ω ±10%, 3W	P700-MISCELLANEOUS											
R758	1	1	1	GX1022203	0.22Ω ±10%, 3W	L701	1	1	1	LC2272001	Coil, 2.7μH						
R759	1	1	1	GX1022203	0.22Ω ±10%, 3W	L702	1	1	1	LC2272001	Coil, 2.7μH						
R760	1	1	1	RC1039212	3.9KΩ ±10%, ½W	J701	?	1	1	1	YP1000113	Plug					
R761	1	1	1	RC1039212	3.9KΩ ±10%, ½W	J730											
R762	1	1	1	GF0522014	22Ω	POWER SUPPLY CIRCUIT BOARD-P800											
R763	1	1	1	GF0522014	22Ω	P800	1	1	1	YD2916002	P.W. Board, Power Supply (Print Only)						
R764	1	1	1	RC1002212	2.2Ω ±10%, ½W		1	1	1	ZZ2927202	P.W. Board Assembly						
R765	1	1	1	RC1002212	2.2Ω ±10%, ½W	P800-RESISTORS											
R766	1	1	1	RA0201005	Trimming, 200Ω(B)	R801	1	1	1	GF0510012	10Ω ±5%, ½W						
R767	1	1	1	RA0201005	Trimming, 200Ω(B)	R802	1	1	1	RT0547214	4.7KΩ±5%, ½W						
P700-CAPACITORS																	
C701	1	1	1	EE3350251	Electrolytic, 3.3μF±20%, 25V	R803	1	1	1	RT0547214	4.7KΩ±5%, ½W						
C702	1	1	1	EE3350251	Electrolytic, 3.3μF ±20%, 25V	R804	1	1	1	RT0539214	4.7KΩ±5%, ½W						
C703	1	1	1	DD1620101	Ceramic, 200PF ±10%, 50V	R805	1	1	1	RT0522314	3.9KΩ±5%, ½W						
C704	1	1	1	DD1620101	Ceramic, 200PF ±10%, 50V	R806	1	1	1	RA0502013	22KΩ±5%, ½W						
C705	1	1	1	EA1060359	Electrolytic, 10μF+100%,-10%,35V	R807	1	1	1	GS1015105	Trimming, 5KΩ(B)						
C707	1	1	1	DD1003050	Ceramic, 3PF, 500V	R808	1	1	1	RT0533214	150Ω ±10%, 5W						
C708	1	1	1	DD1003050	Ceramic, 3PF, 500V	R809	1	1	1	RT0510014	3.3KΩ±5%, ½W						
C709	1	1	1	EA4760509	Electrolytic, 47μF+100%,-10%,50V	R810	1	1	1	RT0518314	10Ω ±5%, ½W						
C710	1	1	1	EA4760509	Electrolytic, 47μF+100%,-10%,50V						18KΩ ±5%, ½W						
C711	1	1	1	EE4760162	Electrolytic, 47μF ±20%, 16V												

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	U	C	E		
R811	1	1	1	RT0515314	15KΩ ±5%, ½W
R812	1	1	1	RT0568214	6.8KΩ ±5%, ½W
R813	1	1	1	RT0524414	240KΩ ±5%, ½W
R814	1	1	1	RT0539314	39KΩ ±5%, ½W
R815	1	1	1	GU0547112	470Ω ±5%, ½W
R816	1	1	1	GU0556212	5.6KΩ ±5%, ½W
R817	1	1	1	GU0556212	5.6KΩ ±5%, ½W
R818	1	1	1	RT0556214	5.6KΩ ±5%, ½W
P800-CAPACITORS					
C801	1	1	1	EA2270631	Electrolytic, 220μF, 63V
C802	1	1	1	EA1070509	Electrolytic, 100μF, 50V
C803	1	1	1	DK1810351	Film, 0.01μF, 50V
C804	1	1	1	EA2260359	Electrolytic, 22μF, 35V
C805	1	1	1	EA3370509	Electrolytic, 330μF, 50V
C806	1	1	1	EA4770169	Electrolytic, 470μF, 16V
C807	1	1	1	EA4750509	Electrolytic, 4.7μF, 50V
C808	1	1	1	EA4760169	Electrolytic, 47μF, 16V
C809	1	1	1	EA2270109	Electrolytic, 220μF, 10V
C810	1	1	1	DK1810351	Ceramic, 0.01μF, 200V
P800-SEMICONDUCTORS					
H801	1	1	1	HT403302A	Transistor, 2SD330 DE
H802	1	1	1	HT313183A	Transistor, 2SC1318 P,Q,R
H803	1	1	1	HT309452A	Transistor, 2SC945 Q,R
H804	1	1	1	HT403314A	Transistor, 2SD331 C,D,E,F
H805	1	1	1	HT309452A	Transistor, 2SC945 Q,R
H806	1	1	1	HT313182R	Transistor, 2SC1318 R,S
H807	1	1	1	HT313182R	Transistor, 2SC1318 R,S
H808	1	1	1	HD2001103	Diode, DS131-B
H809	1	1	1	HD3002309	Diode, WZ-071
H810	1	1	1	HD3002709	Diode, WZ-140
P800-MISCELLANEOUS					
L801	1	1	1	LY2024006	Relay, MY2, 24V
J801	1	1	1	YP1000113	Plug
J810	1	1	1		
GENERAL MISCELLANEOUS					
R001	1	1	1	RS0504002	Variable Resistor, BALANCE
R002	1	1	1	RM0254022	Variable Resistor, VOLUME
R003	1	1	1	RC1022512	Resistor, 2.2MΩ ±10%, ½W
R004	1	1	1	GF0515112	Resistor, 150Ω ±5%, ½W
R005	1	1	1	RT0520214	Resistor, 2KΩ ±5%, ¼W
C001	1	1	1	EC1090502	Electrolytic Cap., 10,000μF, 50V
C002	1	1	1	EC1090502	Electrolytic Cap., 10,000μF, 50V
C003	1	1	1	DK1710301	Ceramic Cap., 0.01μF ±20%, 50V
C004	1	1	1	DK1710301	Ceramic Cap., 0.01μF ±20%, 50V
C005	1	1	1	DK1840301	Ceramic Cap., 0.04μF, 50V
C006	1			DF1722380	Film Cap., 0.022μF ±20%, 1000V
C007	1	1	1	DK1810351	Ceramic Cap., 0.01μF ±20%, 500V
G001	1	1		BF1040003	Printed Comp.
M001	1	1	1	IM1104208	Meter, AM/FM
M002	1	1	1	IN1008030	Lamp, Pointer
M003	1	1	1	IN1008034	Lamp, Stereo Indicator
M004	1	1	1	IN1008007	Lamp, Meter
L001	1	1	1	LF1120038	Antenna Coil, AM
L002	1	1	1	LC1332002	Choke Coil 3.3μH
L003	1	1	1	LC1332002	Choke Coil 3.3μH

REF. DESIG.	QTY. U C E			PART NO.	DESCRIPTION
	U	C	E		
L004	1	1	1	TS1960213	Power Transf., UL, CSA
L004			1	TS1960214	Power Transf.,
H001	1	1	1	HT308971B	Transistor, 2SC897 B, C
H002	1	1	1	HT308971B	Transistor, 2SC897 B, C
H003	1	1	1	HT107571B	Transistor, 2SA757 B, C
H004	1	1	1	HT107571B	Transistor, 2SA757 B, C
H005	1	1	1	HV0000308	Varistor, SV-02
H006	1	1	1	HV0000308	Varistor, SV-02
H007	1	1	1	HD2000510	Diode, 5B-2
H008	1	1	1	HD2001105	Diode, 1S1555
S002	1	1	1	SR1005008	Rotary Switch, Selector
S001	1	1	1	SP0201015	Power Switch
F001	1	1	1	FS1040005	Fuse, 4A, MGC
F002			1	FS2050090	Fuse, 5A, SLA
W001	1	1	1	YC0240010	AC Cord
W001			1	YC0190003	AC Cord
J001	1	1	1	YT0204008	Terminal, 4P, Pin Jack
J002	1	1	1	YT0208006	Terminal, 8P, Pin Jack
J003	1	1	1	YT0201009	Terminal, 1P, Pin Jack
J004	1	1	1	YT0204011	Terminal, 4P, Pin Jack
J006	1	1	1	YT0304006	Terminal, Speaker
J007	1	1	1	YT0304006	Terminal, Speaker
J008	1	1	1	YJ0400048	Jack, AC Outlet
J009	1	1	1	YJ0400048	Jack, AC Outlet
J010	1	1	1	YJ0800012	Socket, Fuse Holder
J011	1	1	1	YJ0100081	Socket, DUBBING IN
J012	1	1	1	YJ0100098	Socket, DUBBING OUT
J013	1	1	1	YJ0100098	Headphone
J014	1	1	1	YJ0500020	Transistor
J015	1	1	1	YJ0500020	Transistor
J016	1	1	1	YJ0500020	Transistor
J017	1	1	1	YJ0500020	Transistor
J018	1	1	1	YL0103018	Terminal, 3P
J019	1	1	1	YT0101003	Terminal, Chassis Ground
J020	1	1	1	YJ0800019	Socket, Lamp
J021	1	1	1	YL0106004	Terminal, Voltage Conversion
PR01			1	YD2871003	FUSE CIRCUIT BOARD-PR01
			1	ZZ2871803	P.W. Board, Fuse (Print Only)
					P.W. Board Assembly
PRO1-MISCELLANEOUS					
JR01	1			YJ0800020	Jack
JR02	1			YJ0800020	Jack
JR03	1			YJ0800020	Jack
JR04	1			YJ0800020	Jack
JR05	1			YJ0800020	Jack
JR06	1			YJ0800020	Jack
JR07	1			YJ0800020	Jack
JR08	1			YJ0800020	Jack
JR09	1			YP1000099	Plug
JR10	1			YP1000099	Plug
JR11	1			YP1000099	Plug
JR12	1			YP1000099	Plug
JR13	1			YP1000099	Plug
JR14	1			YP1000099	Plug
JR15	1			YP1000099	Plug
JR16	1			YP1000099	Plug

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	QTY.			PART NO.	DESCRIPTION
	U	C	E		
FR01		1		FS1040090	Fuse, 4A, SGA
FR02		1		FS1010090	Fuse, 1A, SGA
FR03		1		FS1010090	Fuse, 1A, SGA
FR04		1		FS1040090	Fuse, 4A, SGA

11. TECHNICAL SPECIFICATIONS

AMPLIFIER SECTION

Rated Power Output	...35 Watts per channel, continuous average power, both channels driven.
Power Band	.....20 Hz to 20 kHz
Total Harmonic Distortion	.....0.25%
Load Impedance	.....8 ohms
Intermodulation Distortion at rated power	.....0.5%
Damping Factor	.....45
Frequency Response	.....20 Hz to 20 kHz ±1.0 dB

PREAMPLIFIER SECTION

Phono:

Dynamic Range	.....96 dB
Note: Dynamic Range is the ratio in dB of the phono input overload to equivalent input noise.	
Equivalent Input Noise	.....1.5 µV
Input Overload	.....100 mV
Sensitivities (for rated power output)	

Phono	.....1.8 mV
Tape	.....180 mV
Main In	.....1.0 V
Frequency Response (phono)	
Input Impedances	.....30 Hz to 15 kHz ±1.0 dB
Phono	.....47 K ohms
Aux or Tape	.....100 K ohms
Main In	.....30 K ohms
Tape Output Level	.....775 mV
Ref.: 7.75 mV at phono input	
Signal to Noise Ratio	
Aux Input	.....80 dB
Phono Input	.....65 dB
Tone Controls	
Bass: 50 Hz	.....±10 dB
Mid: 700 Hz	.....±6 dB
Treble: 15 kHz	.....±10 dB

FM TUNER SECTION

Quieting Slope

RF Input for 30 dB Quieting	.....1.9 µV
Quieting at 5µV RF Input	.....52 dB
Quieting at 10 µV RF Input	.....58 dB
Quieting at 50 µV RF Input	.....68 dB

Total Harmonic Distortion

Mono:	.....0.3%
Stereo:	.....0.5%

Selectivity (alternate carrier)65 dB
---------------------------------	------------

Capture Ratio1.5 dB
---------------	-------------

Stereo Separation at 1 kHz40 dB
----------------------------	------------

Spurious Rejection95 dB
--------------------	------------

Image Rejection70 dB
-----------------	------------

IF Rejection90 dB
--------------	------------

AM Suppression50 dB
----------------	------------

AM TUNER SECTION

Sensitivity20 µV
-------------	------------

GENERAL

Power Requirements	120 V AC, 50/60 Hz
Power Consumption at rated output, both channels operating	180 Watts
Idling Power (Volume Control at zero)	30 Watts
Dimensions:	
Panel Width	17-3/8 inches
Panel Height	5-3/8 inches
Depth	14 inches
Weight:	
Unit alone	26.4 lbs.
Packed for shipment	36.4 lbs.

12. SERVICE INFORMATION FOR EUROPEAN MODEL

The information contained herein includes the fuse assembly PR01, rear panel and main chassis component locations, voltage conversion, FTZ regulation, and circuit diagram.

For the alignment method and repairing hints, refer to the original service manual.

TABLE OF CONTENTS

PR01 Circuit Diagram	39
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Main Chassis Component Locations (Bottom View)	40
Voltage Conversion	41
Voltage Conversion Chart	41
FTZ Regulation	41
Circuit Diagram	42~43
Technical Specifications	44~45

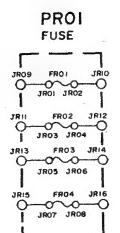


Figure 39. PR01 Circuit Diagram

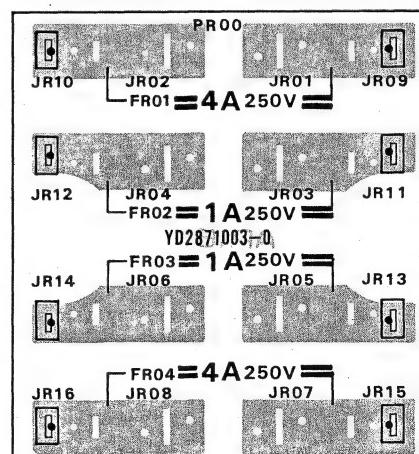


Figure 40. Fuse Board – PR01 Component Assembly Diagram

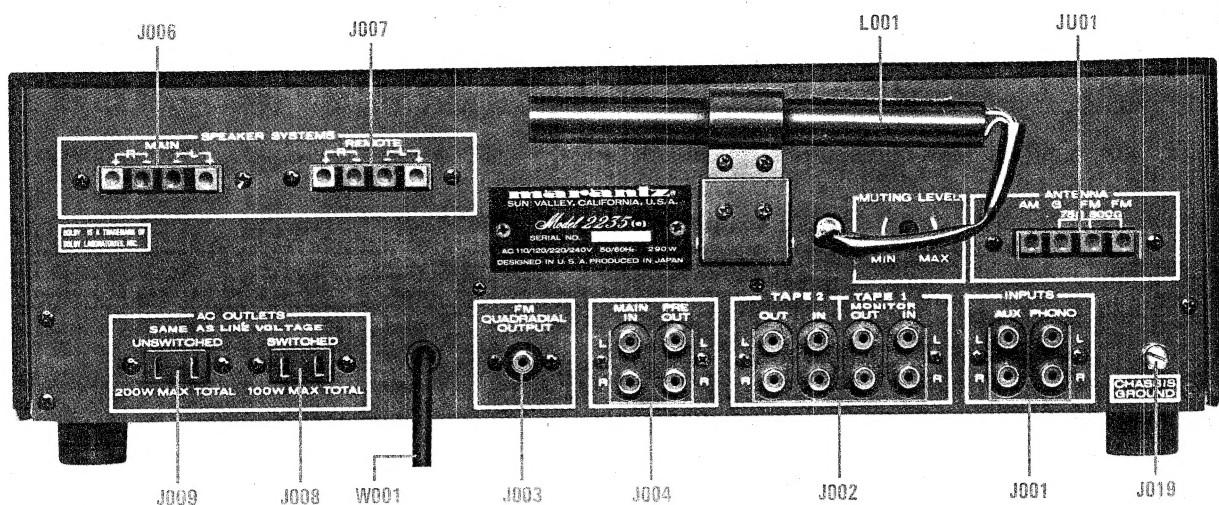


Figure 41. Rear Panel Jacks and Component Locations

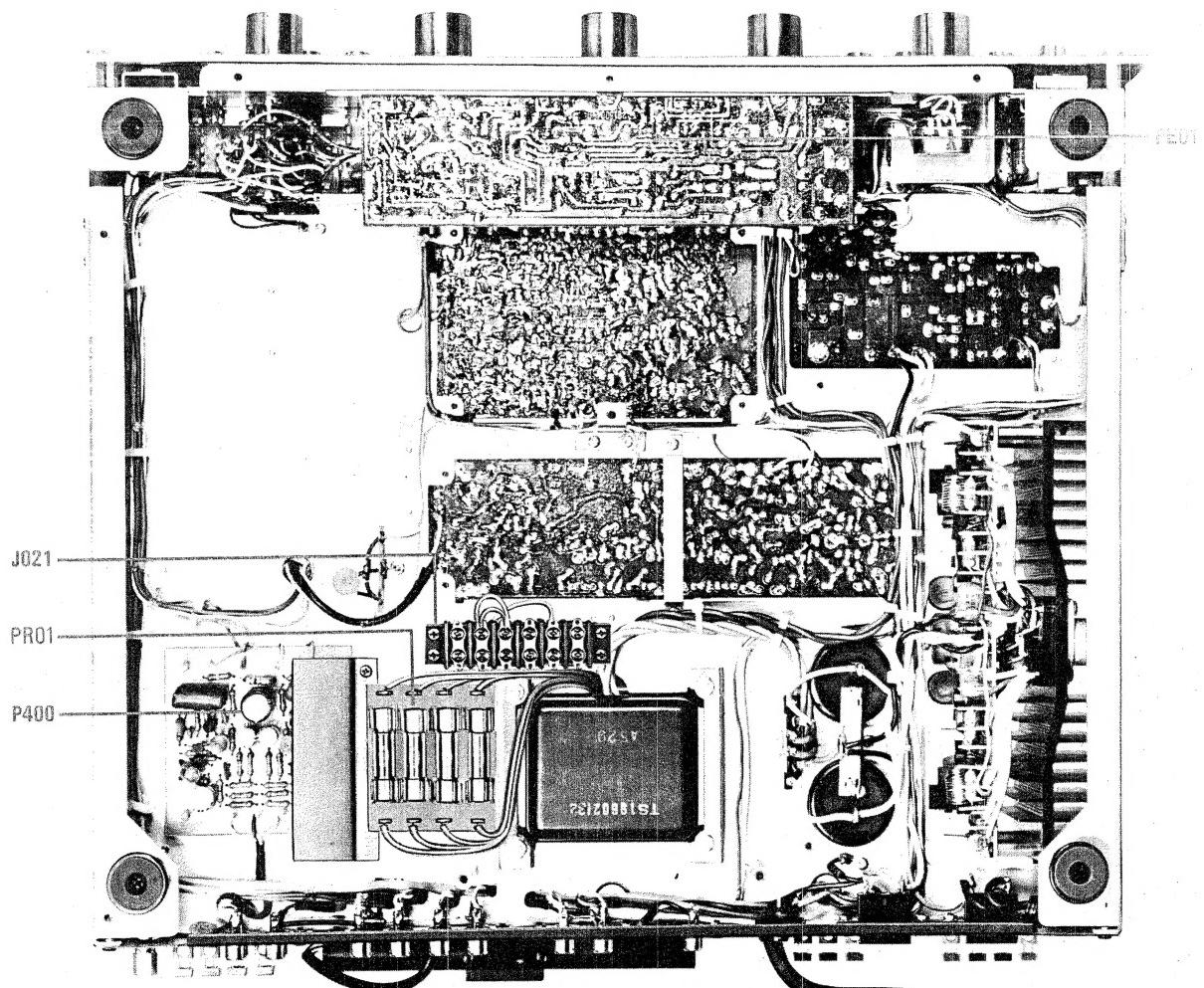


Figure 42. Main Chassis Component Locations (Bottom View)

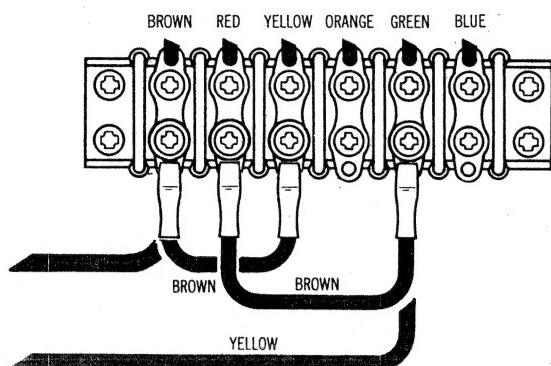
VOLTAGE CONVERSION

This model is equipped with a universal power transformer to permit operation at 110, 120, 220 and 240 V AC 50 to 60 Hz.

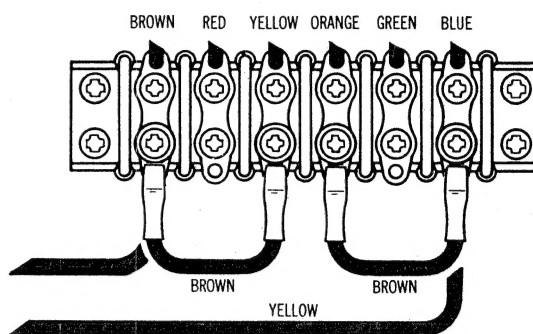
To convert the unit to the required voltage perform the following steps:

- (1) Remove the lid (top).
- (2) Change the jumper wires as illustrated below for the required AC voltage.

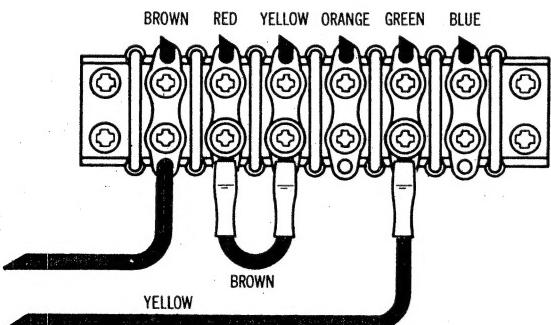
CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.



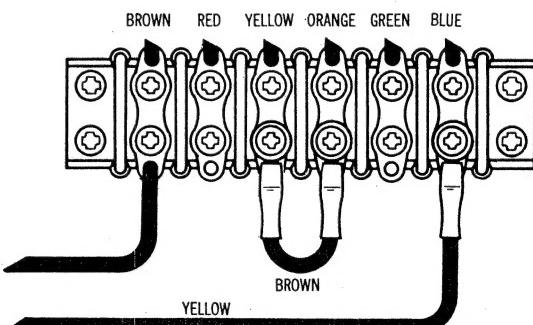
For 110V Operation



For 120V Operation



For 220V Operation



For 240V Operation

Figure 43. Voltage Conversion Chart

FTZ REGULATION

Instruction for the use in the range other than specified in FTZ codes

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

Sollte das Gerät auch für Frequenzen ausserhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfängebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorenspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

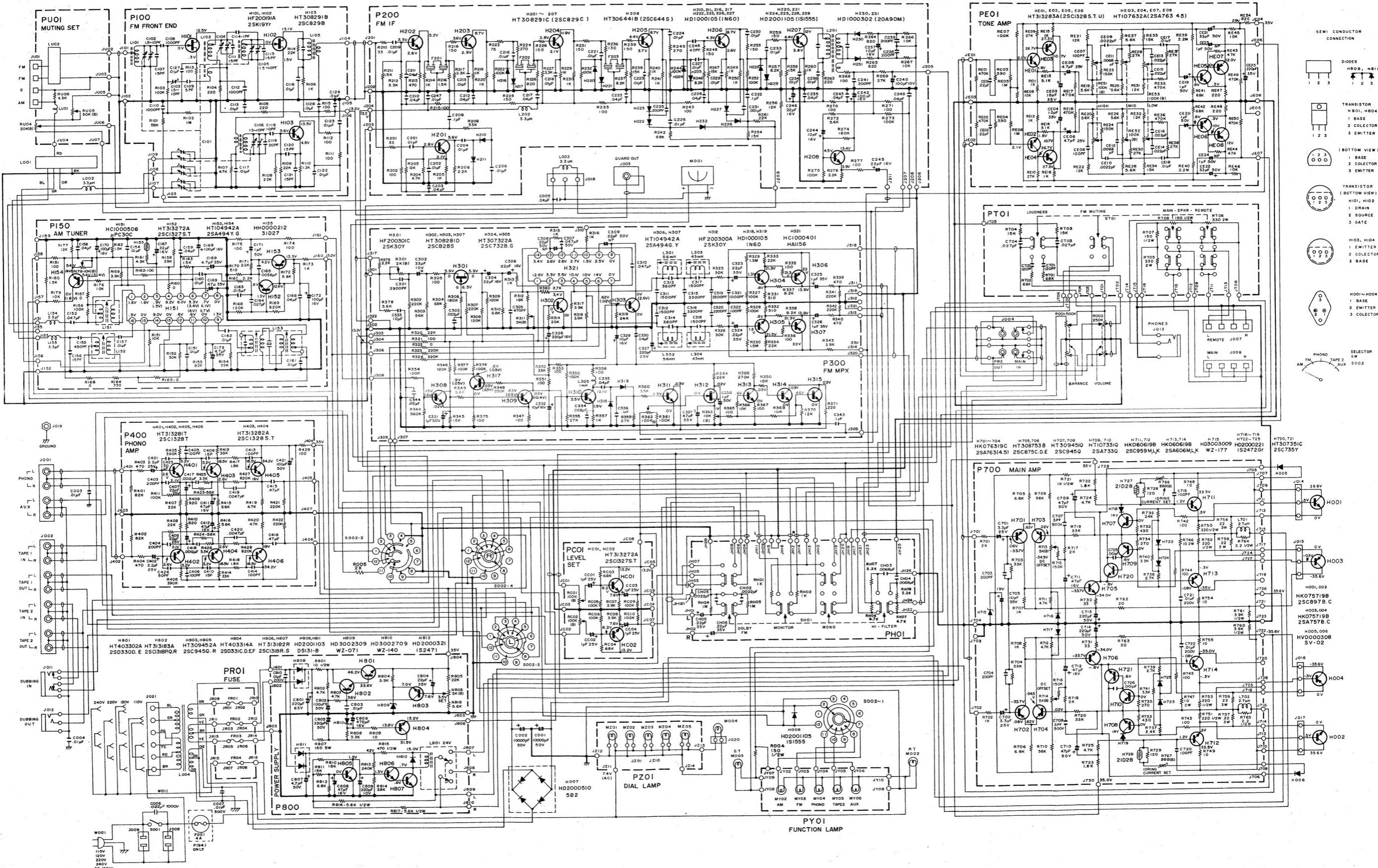


Figure 44. Circuit Diagram

MODEL 2235

NOTE: This circuit diagram applies to units manufactured for the European Market.

marantz**marantz****TECHNICAL SPECIFICATIONS****AMPLIFIER SECTION**

Rated Power Output	35 Watts per channel, continuous average power, both channels driven
Power Band	20 Hz to 20 kHz
Total Harmonic Distortion	0.25%
Load Impedance	8 ohms
Intermodulation Distortion at rated power	0.5%
Damping Factor	45
Frequency Response	20 Hz to 20 kHz ±1.0 dB

PREAMPLIFIER SECTION

Phono:	
Dynamic Range	96 dB
Note: Dynamic Range is the ratio in dB of the phono input overload to equivalent input noise.	
Equivalent Input Noise	1.5 µV
Input Overload	100 mV
Sensitivities (for rated power output)	
Phono	1.8 mV
Tape	180 mV
Main In	1.0 V
Frequency Response (phono)	30 Hz to 15 kHz ±1.0 dB
Input Impedances	
Phono	47 k ohms
Aux or Tape	100 k ohms
Main In	30 ohms
Tape Output Level	775 mV
Ref.: 7.75 mV at phono input	
Signal to Noise Ratio	
Aux Input	80 dB
Phono Input	65 dB
Tone Controls	
Bass: 50 Hz	±10 dB
Mid: 700 Hz	±6 dB
Treble: 15 kHz	±10 dB

FM TUNER SECTION

Sensitivity (DIN)	2.1 µV
Quieting Slope	
RF Input for 30 dB Quieting	1.9 µV
Quieting at 5 µV RF Input	52 dB
Quieting at 10 µV RF Input	58 dB
Quieting at 50 µV RF Input	68 dB
Total Harmonic Distortion	
Mono:	0.3%
Stereo:	0.5%
Selectivity (alternate carrier)	65 dB
Capture Ratio	1.5 dB
Stereo Separation at 1 kHz	40 dB
Spurious Rejection	95 dB
Image Rejection	70 dB
IF Rejection	90 dB
AM Suppression	50 dB

AM TUNER SECTION

Sensitivity	20 µV
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GENERAL

Power Requirements	220 V ~, 50/60 Hz
Power Consumption at rated output, both channels operation	180 Watts
Idling Power (Volume Control at zero)	30 Watts
Dimensions:	
Panel Width	440 mm
Panel Height	137 mm
Depth	356 mm
Weight:	
Unit alone	10.5 kg
Packed for shipment	13.5 kg